Potato

Strategic Agrichemical Review Process (SARP)

May 2026

Hort Innovation
Project – MT25005

Hort Innovation Project Number:
MT25005 – Vegetable Strategic Agrichemical Review Process (SARP) 2026 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 potato industry across Australia. The information in this report will assist the industry with its agrichemical selection and usage into the future.

Date of report:
May 2026

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Hort Innovation Strategic levy investment | VEGETABLE FUND

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1. Summary

The strategic levy investment project Vegetable Industry SARP Report Updates (MT25005) is part of the Hort Innovation Vegetable Fund. A Strategic Agrichemical Review Process (SARP), through the process of a desktop audit and industry liaison;

(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 potato 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 disease is:

Common name	Scientific name
Common Scab	*Streptomyces scabies*
Powdery Scab / Mop Top	*Spongospora subterranean*
Potato Mop Top Virus	PMTV
Target Spot / Early Blight	*Alternaria solani*
Silver Scurf	*Helminthosporuim solani*
Black Dot	*Colletotrichum coccodes*

1.2 Insects and Mites

The high priority insects and mites are:

Common name	Scientific name
Potato Moth	*Phthorimaea operculella*
Tomato Potato Psyllid	*Bactericera cockerelli*

1.3 Weeds

The high priority weeds are:

Common Name	Scientific Name
Flaxleaf Fleabane	*Conyza bonariensis*
Nutgrass	*Cyperus rotundus*
Annual Ryegrass	*Lolium rigidum*
Couch Grass	*Cynodon dactylon*
Volunteer Potatoes	*Solanum tuberosum*

1.4 Plant Growth Regulators

The high priority plant growth regulator issues are:

PGR Issue
Inhibition of sprouting

2. The Australian Potato Industry

The Australian potato industry is a major horticultural industry and a staple food for Australian households and food services.

Potatoes are grown across Australia, with the majority of production occurring in South Australia and Tasmania. Production occurs year-round.

Fresh Potato Seasonality by State

State	24/25 Tonnes	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Tasmania	467,913												
South Australia	442,109												
Victoria	269,109												
New South Wales	162,231												
Queensland	82,661												
Western Australia	69,701												
Availability Legend			High			Medium			Low			None	

Production for the year ending June 2025[1] was 1,493,725 tonnes with a value of $1,212.7m. Sixty six percent was used for processing, 30% for the domestic fresh market and 3% was exported fresh. Production volume has been stable for the period 2021-2025, but the value of production has increased from $807.3m to $1,212.7m.

Australia is a net exporter of fresh potatoes, typically exporting around 3% of produce. For the year ending June 2025, Australia exported 49,858 tonnes of fresh potatoes. Of this export volume, 41.3% was destined for South Korea, followed by Philippines (17.8%), Indonesia (11.5%), Taiwan (9.7%) and Singapore (4.7%).

[1] Hort Innovation (2026). Australian Horticulture Statistics Handbook 2024/25. [online] Available at: https://www.horticulture.com.au/growers/help-your-business-grow/research-reports-publications-fact-sheets-and-more/australian-horticulture-statistics-handbook/

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 potato 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 potato industry regarding pesticide access, Hort Innovation undertook a review of the pesticide requirements via a Strategic Agrichemical Review Process (SARP) in 2017. The current project is to update the SARP with the latest information and progress.

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

Exotic plant pests, not present in Australia, are not addressed in this document. A biosecurity plan has been developed for the Vegetable Industry in consultation with industry, government and scientists. The Biosecurity Plan for the Vegetable Industry[2] which covers potato 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.

[2] https://ausveg.com.au/app/uploads/2018/06/Industry-Biosecurity-Plan-for-the-Vegetable-Industry.pdf

3.2 Minor use permits and registration

From a pesticide access perspective, the APVMA classifies potatoes as a major crop. The crop fits within the APVMA crop group VR0075: Root and tuber vegetables, within the subgroup VR2071: Tuberous & Corm Vegetables. 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 potato industry is for manufacturers to register new pesticides uses in the crop.

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

3.3 Methods

The current update of the Potato Strategic Agrichemical Review Process (SARP), which was last updated in 2016, was conducted by desktop audit using industry information gathered through consultation with growers, agronomists and industry bodies, as well as review current information related to pesticide use in the industry. The process included gathering, collating and confirming information:

Hort Innovation Project Reference	Process of Review - Activity
MT25005 - Vegetable Strategic Agrichemical Review Process (SARP) Report Updates	Engagement and consultation with growers and other relevant stakeholders, in conjunction with AUSVEG. Including small group workshops and one on one consultation nationally. Collation of information collected by commodity on applicable pests, diseases and weeds in order of priority.
MT24008 – Regulatory Support & Response Co-ordination (pesticides) DTS Pty Ltd	**Potato Agrichemical Regulatory Risk Assessment Document** To assist strategic planning, with respect to future pest management options, this document was developed as part of the Hort Innovation funded project MT24008 to highlight the regulatory threats to agrichemicals currently approved for the management of the pests and diseases in potato as well as current initiatives aimed at addressing identified pest management deficiencies.
MT25005 – Vegetable Strategic Agrichemical Review Process (SARP) Report Updates	**SARP updated via a desktop audit:** Review list of priorities rated as high, moderate and low for each plant pest groups (disease, insects and weeds) – provided by VG16060 Identify industries pest priority gaps in order of importance Update current pesticides available via label registrations or minor use permits Update available pesticide use patterns, IPM ranking/compatibility, mode of action and chemical group. Identify pesticides at risk (under review and/or limited uses) via MT24008 Regulatory Support & Response Co-ordination (pesticides) – DTS Pty Ltd. Identify any appropriate solutions through the outcomes of the AgChem Forum's or similar market intelligence and their overall suitability (IPM compatibility, Chemical group to manage resistance, risk profile, existing domestic MRL's or global MRL's including any potential trade barriers, efficacy, OH&S, environmental safety and sustainability). Include known pesticide solutions that are currently under development with registrants for new uses in the nominated crops or in current Hort Innovation projects. Update MRL tables to include Australian MRL's, Codex and any applicable export market MRL's

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 potato
Appendix 2. Products available for control of insects and mites in potato
Appendix 3. Products available for weed control in potato
Appendix 4. Plant Growth Regulators available in potato
Appendix 5. Current permits for use in potato
Appendix 6. Potato Maximum Residue Limits (MRLs)
Appendix 7. Potato Agrichemical Regulatory Risk Assessment

4. Diseases, Pests and Weeds of Potato

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].

In Chapter 4 information on regulatory risk derived from project MT24008 (Regulatory support and response coordination) has been incorporated.

Some of the suggested options have no overseas MRLs (see Appendix 5).

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 potato

4.1.1 Disease priorities

Common name	Scientific name
High	
Common Scab	*Streptomyces scabies*
Powdery Scab	*Spongospora subterranean*
Potato Mop Top Virus	PMTV
Target Spot / Early Blight	*Alternaria solani*
Silver Scurf	*Helminthosporuim solani*
Black Dot	*Colletotrichum coccodes*
Moderate	
Bacterial Soft Rot - Post Harvest	*Erwinia spp.*
Irish (Late) Blight	*Phytophthora infestans*
Pink Rot	*Phytophthora erythroseptica*
Rhizoctonia Rot / Black Scurf	*Rhizoctonia solani*
Sclerotinia Rot	*Sclerotinia sclerotiorum* & *S.minor*
Verticillium Wilt	*Verticillium dahliae*
Low	
Fusarium Dry Rot	*Fusarium* spp.
Bacterial Wilt	*Ralstonia solanacearum*

The high priority diseases based on the feedback received were Common Scab, Powdery Scab / Mop Top, Target Spot / Early Blight, Silver Scurf and Black Dot. Available and potential products for controlling diseases of potato are listed in Section 4.1.2.

Potatoes are affected by foliar and soil-borne diseases. Cultural controls play an important role in integrated disease management programs and are particularly effective tools to manage soil-borne disease in the longer term. Tactics include crop rotation, cover cropping, general farm hygiene to destroy crop residues and remove weed hosts, and management of fields and irrigation practices to reduce waterlogging.

Resistance Management

CropLife Australia have resistance management strategies[5] related to the control of diseases in various crops, 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 6)	
A	Available via either registration or permit approval	R1	Short-term risk: Critical concern over retaining access < 1 year
P	Potential - a possible candidate to pursue for registration or permit	R2	Medium-term risk: Maintaining access of significant concern <2-5 years
P-A	Potential, already approved in the crop for another use	R3	Long-term: Potential issues associated with use - Monitoring required < 5 years
		R4	No current risk / concerns

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
Common Scab (*Streptomyces scabies*) **Priority: High**							
Common Scab is rated as a high priority, particularly in fresh production and processing potatoes for crisping. It is a soil-borne disease that attacks stems, stolons, roots and young tubers. A severe infection can reduce marketable yield, damage the eyes of seed potatoes and reduce the market value of the crop. An integrated control program is critical for managing the disease, including a combination of irrigation management, varietal selection, soil management and fungicides. Long rotations of 3 to 5 years can reduce the severity of the disease, ideally rotating with legumes and avoiding other root vegetables as a break crop.							
Fludioxonil (Maxim 100 FS) Syngenta	12	Protectant	NR	A	ALL	Registered as a seed treatment in potatoes for control of Black Dot (*Colletotrichum coccodes*), Black Scurf (*Rhizoctonia solani*), Fusarium Dry Rot (*Fusarium* spp.), Silver Scurf (*Helminthosporium solani*) and suppression of seed borne **Common Scab** (*Streptomyces* spp.) Apply to the seed potato at or prior to planting or prior to storage, ensuring even distribution over the seed.	R4
Fludioxonil + Sedaxane (Vibrance Premium) Syngenta	12+7	Protectant	NR	A	ALL	Registered as a seed treatment in potatoes for control of Black Dot (*Colletotrichum coccodes*), Black Scurf (*Rhizoctonia solani*), Fusarium Dry Rot (*Fusarium* spp.), Gangrene (*Phoma exigua*), Silver Scurf (*Helminthosporium solani*) and suppression of seed borne **Common Scab** (*Streptomyces* spp.) Apply to the seed potato at or prior to planting or prior to storage, ensuring even distribution over the seed.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Bacillus amyloliquefaciens strain QST713 (Serenade Prime) Bayer	BM02	Biological	NR	P-A	ALL	Registered in potatoes for suppression of Black Scurf / Rhizoctonia Root Rot (*Rhizoctonia solani*). US registration for control of **Common Scab** in root & tuber vegetables.	R4
Powdery Scab (*Spongospora subterranean*) **Priority: High**							
Powdery Scab is rated as a high priority for all regions, both for fresh and processing potatoes. The disease can cause major losses of marketable yield. It is both seed tuber and soil-borne, and the pathogen can survive for long periods in the soil (greater than 10 years). Infections are promoted by high inoculum levels, temperatures between 9°C and 17°C, and wet and poorly drained soils. An integrated disease management approach is critical, including site selection, farm hygiene, using disease-free planting material and variety selection. Fungicide control options are limited.							
Amisulbrom (Amishield)	21	Protectant	A	NR	ALL	Registered in potatoes for control of **Powdery Scab** (*Spongospora subterranea*) and suppression of Pink Rot (*Phytophthora erythroseptica*). Apply as an in-furrow spray at planting as the seed piece is placed in the furrow. Do not irrigate to the point of runoff for at least 24 hours after application.	R4
Fluazinam PER96705	29	Protectant	A	NR NG	TAS	Permitted in potatoes for suppression of **Powdery Scab** (*Spongospora subterranea*). Apply as an in-furrow application at planting.	R4
Hydrogen Peroxide + Peroxyacetic Acid (Peratec Plus)	M	Protectant	A	NR	ALL	Registered as a seed treatment in potatoes (seed) for control of **Powdery Scab** (*Spongospora subterranean*) and Rhizoctonia Rot / Black Scurf (*Rhizoctonia solani*). Apply to the seed potato prior to planting, ensuring even distribution over the seed.	R4
Flusulfamide (Nebijin)	36	Protectant	P			New Zealand registration as a soil treatment or seed treatment for control of **Powdery Scab** in potatoes.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Potato Mop Top Virus (PMTV) **Priority: High**							
Potato Mop Top Virus is rated as a high priority although it has currently only been confirmed as present in Tasmania. The virus is vectored by the same pathogen that causes Powdery Scab. The spores of *Spongospora subterranean* can persist for many years in soil and these spores can carry PMTV. Contaminated soil, seed potatoes and equipment are major pathways for spread.							
No chemical controls are available, but control of *Spongospora subterranean* for Powery Scab management should reduce virus loads in the soil.							
Target Spot / Early Blight (*Alternaria solani*) **Priority: High**							
Early Blight is rated as a high priority in both fresh and processing potatoes. It attacks the above-ground plant parts and can cause substantial losses if outbreaks occur early in the season. The industry is vulnerable to the development of resistance in current fungicide controls as there is reliance on a small number of fungicide groups. Cultural measures can assist to reduce the pressure on fungicides, including crop rotation to reduce starting inoculum levels, use of disease-free planting material and burning dead haulms after harvest to reduce carry over to the following season.							
Azoxystrobin (Amistar)	11	Protectant & Curative	NR	A	ALL	Registered in potatoes for control of **Early Blight** / **Target Spot** (*Alternaria solani*), Late Blight (*Phytophthora infestans*), Black Scurf (*Rhizoctonia solani*) and suppression of Silver Scurf (*Helminthosporium solani*). Apply as a foliar spray as part of a protective disease control program. Use a retreatment interval of 7-14 days, with no more than 3 consecutive applications. Do not use as more than 1/3 of the total fungicide applications per crop.	R4
Azoxystrobin + Difenoconazole (Amistar Top)	11+3	Protectant & Curative	7	A	ALL	Registered in potatoes for control of **Early Blight** / **Target Spot** (*Alternaria solani*) and Late Blight (*Phytophthora infestans*). Apply as a foliar spray as part of a protective disease control program. Use a retreatment interval of 7-14 days, with no more than 3 consecutive applications. Do not exceed more than 50% of the total fungicide applications or a maximum of 6 applications per crop, whichever is the lower.	R3

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Boscalid + Metiram / Mancozeb 750DF (Filan + Metiram / Mancozeb 750DF)	7+M3	Protectant	7	A	ALL	Registered in potatoes for control of **Early Blight** (*Alternaria solani*). Apply as a foliar spray when conditions favour disease development in the period between row closure and the beginning of flowering. Use a retreatment interval of 10-14 days. Maximum of 4 applications per year with no more than 2 consecutive applications.	R2
Boscalid + Mancozeb 420SC (Filan + Mancozeb 420SC)			14				
Chlorothalonil (Bravo)	M5	Protectant	NR	A	ALL	Registered in potatoes for control of **Early Blight** / **Target Spot** (*Alternaria solani*) and Late Blight / Irish Blight (*Phytophthora infestans*). Apply as a foliar spray at first sign of disease or at flowering time, whichever is earlier. Use a retreatment interval of 7-14 days. Maximum number of applications per crop not specified.	R2
Copper	M1	Protectant	1	A	ALL	Registered in potatoes for control of **Target Spot** and Irish Blight. Apply as a foliar spray from emergence to crop maturity. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R4
Cyproconazole (Alto)	3	Protectant & Curative	14 G:14	A	QLD	Registered in potatoes for control of **Early Blight** / **Target Spot** (*Alternaria solani*) and Late Blight (*Phytophthora infestans*). Apply as a foliar spray when conditions favour disease. Use a retreatment interval of 7-10 days. Maximum of 5 applications per year with no more than 3 consecutive applications.	R3
Difenoconazole (Score)	3	Protectant & Curative	7	A	ALL	Registered in potatoes for control of **Early Blight** / **Target Spot** (*Alternaria solani*). Apply as a foliar spray when rows meet and before disease occurs. Use a retreatment interval of 7-14 days. Maximum of 6 applications per year with no more than 2 consecutive applications.	R3
Dimethomorph (Acrobat)	40	Protectant	14	A	ALL	Registered in potatoes for control of **Early Blight** (*Alternaria solani*) and Late Blight (*Phytophthora infestans*). Apply as a foliar spray when conditions favour the disase4 but before symptoms are evident. Use a retreatment interval of 7-10 days. Maximum of 4 applications per crop.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Fluazinam + Azoxystrobin (Drabant) FMC	29+11	Protectant	14	A	ALL	Registered in potatoes for control of **Early Blight** / **Target Spot** (*Alternaria solani*) and Late Blight (*Phytophthora infestans*). Apply as a foliar spray when conditions favour disease development. Use a retreatment interval of 7-14 days, with no more than 3 consecutive applications. Do not use as more than 1/3 of the total fungicide applications per crop.	R4
Iprodione (Rovral)	2	Curative	NR	A	ALL	Registered in potatoes for control of Sclerotinia Rot (*Sclerotinia sclerotiorum*), **Target Spot** / **Early Blight** (*Alternaria solani*) and Hypocotyl Rot / Black Scurf (*Rhizoctonia solani*). Apply as a foliar spray when conditions favour disease development. Retreatment interval not specified. Maximum of 4 applications per crop, with no more than 2 consecutive applications.	R4
Mancozeb	M3	Protectant	NR	A	ALL	Registered in potatoes for control of **Early Blight** and Late Blight. Apply as a foliar spray when disease symptoms first appear. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R2
Mancozeb + Dimethomorph (Acrobat WDG) BASF	M3+40	Protectant & Curative	49	A	ALL	Registered in potatoes for control of Late Blight (*Phytophthora infestans*) and **Early Blight** (*Alternaria solani*). Apply as a foliar spray when conditions favour disease development but before disease is evident. Use a retreatment interval of 7-10 days. Maximum of 4 applications per crop.	R2
Mancozeb + Metalaxyl (Ridomil Gold MZ) Syngenta	M3+4	Protectant & Curative	7	A	ALL	Registered in potatoes for control of **Early Blight** and Late Blight. Apply as a foliar spray when conditions favour disease development. Use a retreatment interval of 7-10 days with no more than 2 consecutive applications. Maximum of 4 applications per crop.	R2
Metiram (Polyram) BASF	M3	Protectant	7	A	ALL	Registered in potatoes for control of **Early Blight** / **Target Spot** (*Alternaria solani*) and Late Blight / Irish Blight (*Phytophthora infestans*). Apply as a foliar spray when disease symptoms first appear. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R2

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Metiram + Pyraclostrobin (Aero) BASF	M3+11	Protectant & Curative	7	A	ALL	Registered in potatoes for control of **Early Blight** (*Alternaria solani*) and Late Blight / Irish Blight (*Phytophthora infestans*). Apply as a foliar spray when disease symptoms first appear. Use a retreatment interval of 7-10 days, with no more than 2 consecutive applications. Maximum number of applications per crop not specified.	R2
Penthiopyrad (Fontelis) Corteva	7	Protectant	7	A	ALL	Registered in potatoes for control of **Early Blight** (*Alternaria* spp.) and Powdery Mildew (*Erisiphe* spp.) Apply as a foliar spray prior to disease development. Use a retreatment interval of 7-14 days. Maximum of 2 applications per crop.	R4
Procymidone (Sumisclex)	2	Protectant	21	A	ALL	Registered in potatoes for control of Sclerotinia (*Sclerotinia minor*) and **Target Spot** (*Alternaria solani*). Apply as a foliar spray commencing when conditions favour the disease. Use a retreatment interval of 10 days. Maximum of 4 applications per crop.	R4
Propineb (Antracol)	M3	Protectant	1	A	ALL	Registered in potatoes for control of **Target Spot** / **Early Blight** and Irish Blight / Late Blight. Apply as a filar spray when conditions favour the disease. Use a retreatment interval of 7-10 days. Maximum number of applications per season not specified.	R2
Pydiflumetofen (Miravis Adepidyn) Syngenta	7	Protectant	7	A	ALL	Registered in potatoes for control of **Target Spot** / **Early Blight** (*Alternaria solani*). Apply as a foliar spray commencing before the disease occurs. Use a retreatment interval of 14 days. Maximum of 3 applications per crop.	R4
Pydiflumetofen + Difenoconazole (Miravis Duo) Syngenta	7+3	Protectant & Curative	1 NG	A	ALL	Registered in root & tuber vegetables, including potatoes, for control of **Early Blight** / **Target Spot** (*Alternaria* spp.), Powdery Mildew (*Erysiphe* spp., *Oidium* spp.) and Cercospora Leaf Spot (*Cercospora* spp.) Apply as a foliar spray when conditions favour disease and before the onset of symptoms. Use a retreatment interval of 7-10 days. Maximum of 2 applications per crop.	R3
Pydiflumetofen + Fludioxonil (Miravis Prime) Syngenta	7+12	Protectant	14 NG	A	ALL	Registered in potato for control of White Mould (*Sclerotinia sclerotiorum*), Grey Mould (*Botrytis cinerea*) and **Early Blight** (*Alternaria solani*). Apply as a foliar spray as part of a protectant fungicide program. Use a retreatment interval of 7-14 days. Maximum of 2 applications per crop.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Pyrimethanil (Pyper 600 SC)	9	Protectant	NR	A	ALL	Registered in potatoes for control of **Target Spot** / **Early Blight** (*Alternaria solani*). Apply as a foliar spray commencing at row closure or earlier if conditions favour disease development. Use a retreatment interval of 7-14 days. Maximum of 3 applications per season, with no more than 2 consecutive applications.	R4
Zineb	M3	Protectant	NR	A	ALL	Registered in potatoes for control of **Early Blight** and Late Blight. Apply as a foliar spray commencing at flowering or when disease is first expected. Use a retreatment interval of 14 days. Maximum number of applications per crop not specified.	R2
Fluazinam	29	Protectant	14 NG	P-A	ALL	Registered in potatoes for control of Late Blight (*Phytophthora infestans*) and Sclerotinia (*Sclerotinia* spp.) US registration for control of ***Alternaria*** in carrots.	R4
Bacillus amyloliquefaciens (Serenade Opti) Bayer	BM 02	Biological	NR	P		Registered in grapes and strawberries for control of Botrytis, in tomatoes, capsicums and chillies for suppression of Bacterial Spot and in avocado, other tropical fruit crops (excluding banana) and mango for control of Anthracnose and suppression of Stem End Rot. US registration for control of ***Alternaria*** in berries, brassica vegetables, citrus, bulb vegetables, herbs/spices, root/tuber and corm vegetables, stone fruit and tree nuts.	R4
Bacillus amyloliquefaciens strain MBI 600 (Serifel) BASF	BM 02	Biological	NR	P		Registered for control of Botrytis in grapevines and strawberries. US registration for control of ***Alternaria*** in artichoke, asparagus, berries, brassica leafy vegetables, bulb vegetables, citrus, cucurbits, pome fruit, stone fruit and tobacco.	R4
Florylpicoxamid (Verpixo Adavelt) Corteva	21	Protectant & Curative		P		Registered for control of Target Spot (*Alternaria solani*) in capsicum, chilli, eggplant, okra and tomato.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Fluopyram + Trifloxystrobin (Luna Sensation) Bayer	7+11	Protectant & Curative		P		Registered for control of ***Alternaria***, Black Spot and Powdery Mildew in apples, Black Spot in pears, Blossom Blight, Brown Rot, Hull Rot, Shot Hole and Rust in stone fruit, and various leaf diseases in tropical fruits. US registration for control of ***Alternaria*** in almond, Brassica vegetables, Brassica leafy vegetables, carrot, citrus, pome fruit, small vine climbing fruit except kiwi fruit, leafy greens, cucurbits, tree nuts, fruiting vegetables & root vegetables except sugar beet.	R4
Fluxapyroxad + Pyraclostrobin (Merivon) BASF	7+11	Protectant & Curative		P		Registered for control of Alternaria Leaf Spot, Black Spot, Brown Rot Nut Scab, Shot Hole and Rust in almond, Brown Rot in cherries and Husk Spot in macadamia. US registration for control of **Alternaria Leaf Blight**, Powdery Mildew, Anthracnose, Cercospora Leaf Spot, Gummy Stem Blight, Microdochium Blight, Target Leaf Spot and suppression of Downy Mildew in cucurbits.	R4
Mefentrifluconazole (Belanty) BASF	3	Protectant & Curative		P		Registered for suppression of **Alternaria** (*Alternaria mali*) in apples.	R4
Silver Scurf (*Helminthosporuim solani*) **Priority: High**							
Silver Scurf is rated as a high priority, and being a blemish disease, it is of most concern in fresh production. The incidence and severity of Silver Scurf can increase significantly during storage. The disease is seed borne and infected seed tubers are thought to be the main source of inoculum. Survival of spores in the soil is thought to be poor. General farm hygiene, disease-free planting material and controlled storage environment can assist the strategic use of fungicides in managing Silver Scurf.							
Azoxystrobin (Amistar)	11	Protectant & Curative	NR	A	ALL	Registered in potatoes for control of Early Blight / Target Spot (*Alternaria solani*), Late Blight (*Phytophthora infestans*), Black Scurf (*Rhizoctonia solani*) and suppression of **Silver Scurf** (*Helminthosporium solani*). Apply as a foliar spray as part of a protective disease control program. Use a retreatment interval of 7-14 days, with no more than 3 consecutive applications. Do not use as more than 1/3 of the total fungicide applications per crop.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Fludioxonil (Maxim 100 FS) Syngenta	12	Protectant	NR	A	ALL	Registered as a seed treatment in potatoes for control of Black Dot (*Colletotrichum coccodes*), Black Scurf (*Rhizoctonia solani*), Fusarium Dry Rot (*Fusarium* spp.), **Silver Scurf** (*Helminthosporium solani*) and suppression of seed borne Common Scab (*Streptomyces* spp.) Apply to the seed potato at or prior to planting or prior to storage, ensuring even distribution over the seed.	R4
Fludioxonil + Sedaxane (Vibrance Premium) Syngenta	12+7	Protectant	NR	A	ALL	Registered as a seed treatment in potatoes for control of Black Dot (*Colletotrichum coccodes*), Black Scurf (*Rhizoctonia solani*), Fusarium Dry Rot (*Fusarium* spp.), Gangrene (*Phoma exigua*), **Silver Scurf** (*Helminthosporium solani*) and suppression of seed borne Common Scab (*Streptomyces* spp.) Apply to the seed potato at or prior to planting or prior to storage, ensuring even distribution over the seed.	R4
Imazalil (Magnate 750 WSP)	3	Protectant & Curative	NR	A	ALL	Registered in potato tubers for control of **Silver Scurf** (*Helminthosporim solani*), Gangrene (*Phoma exigua*) and Dry Rot (*Fusarium* spp.) Apply as a mist over the potatoes on the conveyor prior to storage.	R4
Thiabendazole (Tecto)	1	Protectant	NR	A	ALL	Registered in potatoes for control of Dry Rot (*Fusarium* spp.), Gangrene (*Phoma exigua*) and **Silver Scurf** (*Helminthosporium solani*). Apply as a mist over the potatoes on the conveyor prior to storage.	R4
Bacillus amyloliquefaciens strain MBI 600 (Serifel) BASF	BM 02	Biological	NR	P		Registered for control of Botrytis in grapevines and strawberries. US registration for control of **Silver Scurf** in root & tuber vegetables (except sugar beet).	R4
Fluopyram + Trifloxystrobin (Luna Sensation) Bayer	7+11	Protectant & Curative		P		Registered for control of *Alternaria*, Black Spot and Powdery Mildew in apples, Black Spot in pears, Blossom Blight, Brown Rot, Hull Rot, Shot Hole and Rust in stone fruit, and various leaf diseases in tropical fruits. US registration for control of **Silver Scurf** in root vegetables except sugar beet.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Black Dot (*Colletotrichum coccodes*) **Priority: High**							
Black Dot is rated as a high priority and is similar to Silver Scurf in being a blemish disease and of most concern in fresh production. It can be mistaken for Silver Scurf but requires different management strategies. The pathogen can persist in soil for up to 8 years, reducing the effectiveness of rotations. It is important to use disease-free planting material in conjunction with fungicides to manage Black Dot.							
Fludioxonil (Maxim 100 FS) Syngenta	12	Protectant	NR	A	ALL	Registered as a seed treatment in potatoes for control of **Black Dot** (*Colletotrichum coccodes*), Black Scurf (*Rhizoctonia solani*), Fusarium Dry Rot (*Fusarium* spp.), Silver Scurf (*Helminthosporium solani*) and suppression of seed borne Common Scab (*Streptomyces* spp.) Apply to the seed potato at or prior to planting or prior to storage, ensuring even distribution over the seed.	R4
Fludioxonil + Sedaxane (Vibrance Premium) Syngenta	12+7	Protectant	NR	A	ALL	Registered as a seed treatment in potatoes for control of **Black Dot** (*Colletotrichum coccodes*), Black Scurf (*Rhizoctonia solani*), Fusarium Dry Rot (*Fusarium* spp.), Gangrene (*Phoma exigua*), Silver Scurf (*Helminthosporium solani*) and suppression of seed borne Common Scab (*Streptomyces* spp.) Apply to the seed potato at or prior to planting or prior to storage, ensuring even distribution over the seed.	R4
Azoxystrobin + Difenoconazole (Amistar Top)	11+3	Protectant & Curative	7	P-A	ALL	Registered in potatoes for control of Early Blight / Target Spot (*Alternaria solani*) and Late Blight (*Phytophthora infestans*). US registration for control of **Black Dot** in potatoes.	R3
Pydiflumetofen + Fludioxonil (Miravis Prime) Syngenta	7+12	Protectant	14 NG	P-A	ALL	Registered in potato for control of White Mould (*Sclerotinia sclerotiorum*), Grey Mould (*Botrytis cinerea*) and Early Blight (*Alternaria solani*). US registration for control of **Black Dot** in potatoes.	R4
Aureobasidium pullulans Strain DSM 14940 & DSM 14941 (Botector) Nufarm	-	Biological / Protectant	NR	P	ALL	Registered for control of Botrytis and other diseases in grapes, berries and fruiting vegetables, including the suppression of ***Colletotrichum* spp.** in berries.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Bacillus amyloliquefaciens (Serenade Opti) Bayer	BM 02	Biological	NR	P		Registered in grapes and strawberries for control of Botrytis, in tomatoes, capsicums and chillies for suppression of Bacterial Spot and in avocado, other tropical fruit crops (excluding banana) and mango for control of Anthracnose and suppression of Stem End Rot. US registration for control of **Black Dot** in root & tuber vegetables.	R4
Bacillus amyloliquefaciens strain MBI 600 (Serifel) BASF	BM 02	Biological	NR	P		Registered for control of Botrytis in grapevines and strawberries. US registration for control of **Black Dot** in root & tuber vegetables (except sugar beet).	R4
BLAD (ProBlad Plus)	BM 01	Biological	NR	P		Registered for control of Brown Rot and Blossom Blight in stone fruit. US registration for control of ***Colletotrichum* spp.** in strawberries.	R4
Fluopyram + Trifloxystrobin (Luna Sensation) Bayer	7+11	Protectant & Curative		P		Registered for control of *Alternaria*, Black Spot and Powdery Mildew in apples, Black Spot in pears, Blossom Blight, Brown Rot, Hull Rot, Shot Hole and Rust in stone fruit, and various leaf diseases in tropical fruits. US registration for control of **Black Dot** in root vegetables except sugar beet.	R4
Bacterial Soft Rot - Post Harvest (*Pectobacterium spp., Dickeya* spp.) **Priority: Moderate**							
Bacterial Soft Rot is rated as a moderate priority. It is seed borne and can cause significant crop losses. Integrated management options include the use of whole seed rather than cut seed for planting, avoid planting in extremely wet or hot conditions, using long crop rotations, general farm hygiene and use of modern cool stores to reduce post-harvest losses.							
Chlorine	-	Sanitiser	NR	A	ALL	Registered as a sanitiser / post-harvest treatment for control of bacteria and fungi. Spray or dip harvested produce, minimum of 30 seconds contact time with treated water.	R4
Iodine	-	Sanitiser	NR	A	ALL	Registered in root crops as a sanitiser / post-harvest treatment for control of bacteria and fungi. Dip harvested produce, minimum of 1 minute contact time with treated water.	R4
Peroxyacetic Acid	M	Sanitiser / Post-Harvest Treatment	NR	A	ALL	Registered as a sanitiser / post-harvest treatment for control of bacteria. Spray or dip harvested produce.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Copper	M1	Protectant	1	P-A	ALL	Registered in potatoes for control of Target Spot and Irish Blight. Registered for control of Bacterial Spot in stone fruit, brassica vegetables, cucurbits, peas and tomatoes.	R4
Acibenzolar-S-Methyl (Actigard Plant Activator) Syngenta	P01	Protectant	NR	P		Not registered in Australia, but Bion contains the same active ingredient and is registered as a seed dressing in cotton for suppression of Fusarium Wilt and Black Root Rot in cotton. US registration for control of various bacterial diseases in brassica leafy vegetables, citrus, cucurbits, low growing berries, bulb onions, pome fruit and tomato.	R4
Bacillus amyloliquefaciens (Serenade Opti) Bayer	BM 02	Biological	NR	P		Registered for suppression of Bacterial Spot in tomatoes, capsicums and chillies.	R4
Bacillus amyloliquefaciens strain MBI 600 (Serifel) BASF	BM 02	Biological	NR	P		Registered for control of Botrytis in grapevines, strawberries and berries. US registration for control of bacterial diseases in root & tuber vegetables (except sugar beet), tree nuts, berries, fruiting vegetables, leafy vegetables and stone fruit.	R4
Irish (Late) Blight (*Phytophthora infestans*) **Priority: Moderate**							
Late Blight is rated as a moderate priority. It is a serious soil-borne disease but the strain present in Australia cannot survive without a host. It thrives under prolonged periods of warm, humid weather and is exacerbated in poorly drained soils. Fungicide controls are effective but should be used in conjunction with good farm hygiene, resistant varieties, rotation with non-host crops and avoiding waterlogged fields if possible.							
Azoxystrobin (Amistar)	11	Protectant & Curative	NR	A	ALL	Registered in potatoes for control of Early Blight / Target Spot (*Alternaria solani*), **Late Blight** (*Phytophthora infestans*), Black Scurf (*Rhizoctonia solani*) and suppression of Silver Scurf (*Helminthosporium solani*). Apply as a foliar spray as part of a protective disease control program. Use a retreatment interval of 7-14 days, with no more than 3 consecutive applications. Do not use as more than 1/3 of the total fungicide applications per crop.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Azoxystrobin + Difenoconazole (Amistar Top)	11+3	Protectant & Curative	7	A	ALL	Registered in potatoes for control of Early Blight / Target Spot (*Alternaria solani*) and **Late Blight** (*Phytophthora infestans*). Apply as a foliar spray as part of a protective disease control program. Use a retreatment interval of 7-14 days, with no more than 3 consecutive applications. Do not exceed more than 50% of the total fungicide applications or a maximum of 6 applications per crop, whichever is the lower.	R3
Chlorothalonil (Bravo)	M5	Protectant	NR	A	ALL	Registered in potatoes for control of Early Blight / Target Spot (*Alternaria solani*) and **Late Blight / Irish Blight** (*Phytophthora infestans*). Apply as a foliar spray at first sign of disease or at flowering time, whichever is earlier. Use a retreatment interval of 7-14 days. Maximum number of applications per crop not specified.	R2
Copper	M1	Protectant	1	A	ALL	Registered in potatoes for control of Target Spot and **Irish Blight**. Apply as a foliar spray from emergence to crop maturity. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R4
Cyazofamid (Ranman) UPL	21	Protectant	7	A	ALL	Registered in potatoes for control of **Late Blight** (*Phytophthora infestans*). Apply as a foliar spray when conditions favour disease development and before symptoms appear. Use a retreatment interval of 7-10 days. Maximum of 6 applications per crop, with no more than 3 consecutive applications.	R4
Cyproconazole (Alto)	3	Protectant & Curative	14 G:14	A	QLD	Registered in potatoes for control of Early Blight / Target Spot (*Alternaria solani*) and **Late Blight** (*Phytophthora infestans*). Apply as a foliar spray when conditions favour disease. Use a retreatment interval of 7-10 days. Maximum of 5 applications per year with no more than 3 consecutive applications.	R3
Dazomet (Basamid)	8F	Soil Fumigant	NR	A	ALL	Pre-plant fumigant in seed beds for control of soil fungi including *Pythium*, ***Phytophthora***, *Sclerotinia*, *Sclerotium*, *Rhizoctonia*, *Verticillium*, *Plasmodiophora*, *Armillaria* and *Fusarium* spp. Apply granules to the soil surface and incorporate and seal the soil surface immediately. Do not plant into soil until a positive germination test has been conducted.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Dimethomorph (Acrobat)	40	Protectant	14	A	ALL	Registered in potatoes for control of Early Blight (*Alternaria solani*) and **Late Blight** (*Phytophthora infestans*). Apply as a foliar spray when conditions favour the disase4 but before symptoms are evident. Use a retreatment interval of 7-10 days. Maximum of 4 applications per crop.	R4
Fluazinam	29	Protectant	14 NG	A	ALL	Registered in potatoes for control of **Late Blight** (*Phytophthora infestans*) and Sclerotinia (*Sclerotinia* spp.) Apply as a foliar spray before disease becomes established. Use a retreatment interval of 7-10 days. Maximum number of treatments per crop not specified.	R4
Fluazinam + Azoxystrobin (Drabant) FMC	29+11	Protectant	14	A	ALL	Registered in potatoes for control of **Early Blight** / **Target Spot** (*Alternaria solani*) and Late Blight (*Phytophthora infestans*). Apply as a foliar spray when conditions favour disease development. Use a retreatment interval of 7-14 days, with no more than 3 consecutive applications. Do not use as more than 1/3 of the total fungicide applications per crop.	R4
Mancozeb	M3	Protectant	NR	A	ALL	Registered in potatoes for control of Early Blight and **Late Blight**. Apply as a foliar spray when disease symptoms first appear. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R2
Mancozeb + Dimethomorph (Acrobat WDG) BASF	M3+40	Protectant & Curative	49	A	ALL	Registered in potatoes for control of **Late Blight** (*Phytophthora infestans*) and Early Blight (*Alternaria solani*). Apply as a foliar spray when conditions favour disease development but before disease is evident. Use a retreatment interval of 7-10 days. Maximum of 4 applications per crop.	R2
Mancozeb + Metalaxyl (Ridomil Gold MZ) Syngenta	M3+4	Protectant & Curative	7	A	ALL	Registered in potatoes for control of Early Blight and **Late Blight**. Apply as a foliar spray when conditions favour disease development. Use a retreatment interval of 7-10 days with no more than 2 consecutive applications. Maximum of 4 applications per crop.	R2
Metham Sodium	-	Soil Fumigant	NR	A	ALL	Registered in food crops as a pre-plant fumigant for control of fungus diseases including *Rhizoctonia*, *Pythium*, *Fusarium*, ***Phytophthora***, *Verticillium*, *Sclerotinia* and Club Root of crucifers. Applied as a soil injection, soil surface spray in front of a rotary tiller or through approved trickle irrigation systems.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Metiram (Polyram) BASF	M3	Protectant	7	A	ALL	Registered in potatoes for control of Early Blight / Target Spot (*Alternaria solani*) and **Late Blight** / **Irish Blight** (*Phytophthora infestans*). Apply as a foliar spray when disease symptoms first appear. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R2
Metiram + Pyraclostrobin (Aero) BASF	M3+11	Protectant & Curative	7	A	ALL	Registered in potatoes for control of Early Blight (*Alternaria solani*) and **Late Blight** / **Irish Blight** (*Phytophthora infestans*). Apply as a foliar spray when disease symptoms first appear. Use a retreatment interval of 7-10 days, with no more than 2 consecutive applications. Maximum number of applications per crop not specified.	R2
Propamocarb Hydrochloride + Fluopicolide (Infinito SC) Bayer	28+43	Protectant	14	A	ALL	Registered in potatoes for control of **Late Blight** (*Phytophthora infestans*). Apply as a foliar spray commencing when conditions favour disease. Use a retreatment interval of 7-10 days. Maximum of 2 applications per crop.	R4
Propineb (Antracol)	M3	Protectant	1	A	ALL	Registered in potatoes for control of Target Spot / Early Blight and **Irish Blight** / Late Blight. Apply as a filar spray when conditions favour the disease. Use a retreatment interval of 7-10 days. Maximum number of applications per season not specified.	R2
Zineb	M3	Protectant	NR	A	ALL	Registered in potatoes for control of Early Blight and **Late Blight**. Apply as a foliar spray commencing at flowering or when disease is first expected. Use a retreatment interval of 14 days. Maximum number of applications per crop not specified.	R2
Bacillus amyloliquefaciens strain QST713 (Serenade Prime) Bayer	BM02	Biological	NR	P-A	ALL	Registered in potatoes for suppression of Black Scurf / Rhizoctonia Root Rot (*Rhizoctonia solani*). Available in tree crops for application to soil to improve bioavailability of soil resources to horticultural crops.	R4
Phosphorous Acid PER94059	33	Curative	NR NG	P-A	TAS	Permitted in potato for control of Pink Rot (*Phytophthora erythroseptica*).	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Mandipropamid (Revus) Syngenta	40	Curative / Protectant		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.	-
Metalaxyl	4	Protectant		P		Registered as a seed treatment for control of Phytophthora Root Rot in chickpeas and Phytophthora Stem Rot in soybean.	R4
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.	-
Pink Rot (*Phytophthora erythroseptica*) **Priority: Moderate**							
Pink Rot is rated as a moderate priority. It is an important soil-borne storage which causes major issues in Tasmania and is worse in hot dry seasons. High humidity and poor ventilation can cause heavy losses in stored potatoes. Use of good farm hygiene, disease-free planting material, crop rotation, controlled storage conditions and strategic use of fungicides are critical management options for Pink Rot.							
Amisulbrom (Amishield)	21	Protectant	NR	A	ALL	Registered in potatoes for control of Powdery Scab (*Spongospora subterranea*) and suppression of **Pink Rot** (*Phytophthora erythroseptica*). Apply as an in-furrow spray at planting as the seed piece is placed in the furrow. Do not irrigate to the point of runoff for at least 24 hours after application.	R4
Dazomet (Basamid)	8F	Soil Fumigant	NR	A	ALL	Pre-plant fumigant in seed beds for control of soil fungi including *Pythium*, ***Phytophthora***, *Sclerotinia*, *Sclerotium*, *Rhizoctonia*, *Verticillium*, *Plasmodiophora*, *Armillaria* and *Fusarium* spp. Apply granules to the soil surface and incorporate and seal the soil surface immediately. Do not plant into soil until a positive germination test has been conducted.	R4
Mancozeb + Metalaxyl (Ridomil Gold MZ) Syngenta	M3+4	Protectant & Curative	7	A	VIC, TAS, SA & WA	Registered in potatoes for control of **Pink Rot**. Apply as a foliar spray 4-6 weeks after planting after a previous application of Metalaxyl-M. Use a retreatment interval of 14 days. Maximum of 4 applications per crop.	R2

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Metalaxyl-M (Ridomil Gold 480SL) Syngenta	4	Protectant & Curative	NR	A	VIC, SA, WA & TAS	Registered in potatoes for control of **Pink Rot** (*Phytophthora erythroseptica*). Apply once as an in-furrow spray at planting.	R4
Metham Sodium	-	Soil Fumigant	NR	A	ALL	Registered in food crops as a pre-plant fumigant for control of fungus diseases including *Rhizoctonia*, *Pythium*, *Fusarium*, ***Phytophthora***, *Verticillium*, *Sclerotinia* and Club Root of crucifers. Applied as a soil injection, soil surface spray in front of a rotary tiller or through approved trickle irrigation systems.	R4
Phosphorous Acid PER94059	33	Curative	NR NG	A	TAS	Permitted in potato for control of **Pink Rot** (*Phytophthora erythroseptica*). Apply as a foliar spray, commencing 4-6 weeks after planting. Use a minimum retreatment interval of 14 days. Maximum of 4 applications per crop.	R4
Bacillus amyloliquefaciens strain QST713 (Serenade Prime) Bayer	BM02	Biological	NR	P-A	ALL	Registered in potatoes for suppression of Black Scurf / Rhizoctonia Root Rot (*Rhizoctonia solani*). Available in tree crops for application to soil to improve bioavailability of soil resources to horticultural crops.	R4
Mandipropamid (Revus) Syngenta	40	Curative / Protectant		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.	-

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Rhizoctonia Rot / Black Scurf (*Rhizoctonia solani*) **Priority: Moderate**							
Rhizoctonia Rot is rated as a moderate priority. It is a seed and soil-borne disease that attacks the tubers, stems and stolons. Cultural controls are critical to support fungicide seed treatments and in-furrow sprays. Crop rotation, using disease-free seed, avoiding planting into cold and wet soil and general field hygiene will assist to reduce infections.							
1,3-Dichloropropene + Chloropicrin + (Telone C-35)	8B	Soil Fumigant	NR	A	ALL	Registered in vegetables 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.***	R4
Azoxystrobin (Amistar)	11	Protectant & Curative	NR	A	ALL	Registered in potatoes for control of Early Blight / Target Spot (*Alternaria solani*), Late Blight (*Phytophthora infestans*), **Black Scurf** (*Rhizoctonia solani*) and suppression of Silver Scurf (*Helminthosporium solani*). Apply once as an in-furrow spray.	R4
Bacillus amyloliquefaciens strain QST713 (Serenade Prime) Bayer	BM02	Biological	NR	A	ALL	Registered in potatoes for suppression of Black Scurf / **Rhizoctonia Root Rot** (*Rhizoctonia solani*). Apply once as an in-furrow spray at planting.	R4
Dazomet (Basamid)	8F	Soil Fumigant	NR	A	ALL	Pre-plant fumigant in seed beds for control of soil fungi including *Pythium*, *Phytophthora*, *Sclerotinia*, *Sclerotium*, ***Rhizoctonia***, *Verticillium*, *Plasmodiophora*, *Armillaria* and *Fusarium* spp. Apply granules to the soil surface and incorporate and seal the soil surface immediately. Do not plant into soil until a positive germination test has been conducted.	R4
Fludioxonil (Maxim 100 FS) Syngenta	12	Protectant	NR	A	ALL	Registered as a seed treatment in potatoes for control of Black Dot (*Colletotrichum coccodes*), **Black Scurf** (*Rhizoctonia solani*), Fusarium Dry Rot (*Fusarium* spp.), Silver Scurf (*Helminthosporium solani*) and suppression of seed borne Common Scab (*Streptomyces* spp.) Apply to the seed potato at or prior to planting or prior to storage, ensuring even distribution over the seed.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Fludioxonil + Sedaxane (Vibrance Premium) Syngenta	12+7	Protectant	NR	A	ALL	Registered as a seed treatment in potatoes for control of Black Dot (*Colletotrichum coccodes*), **Black Scurf** (*Rhizoctonia solani*), Fusarium Dry Rot (*Fusarium* spp.), Gangrene (*Phoma exigua*), Silver Scurf (*Helminthosporium solani*) and suppression of seed borne Common Scab (*Streptomyces* spp.) Apply to the seed potato at or prior to planting or prior to storage, ensuring even distribution over the seed.	R4
Flutolanil (Moncut SC) Sipcam	7	Protectant	NR	A	ALL	Registered in potatoes for control of **Black Scurf** (*Rhizoctonia solani*). Apply evenly to seed potatoes prior to or at planting.	R4
Hydrogen Peroxide + Peroxyacetic Acid (Peratec Plus)	M	Protectant	NR	A	ALL	Registered as a seed treatment in potatoes (seed) for control of Powdery Scab (*Spongospora subterranean*) and **Rhizoctonia Rot** / **Black Scurf** (*Rhizoctonia solani*). Apply to the seed potato prior to planting, ensuring even distribution over the seed.	R4
Inpyrfluxam (Excalia) Sumitomo	7	Protectant	NR	A	ALL	Registered in potatoes for control of **Rhizoctonia** (*Rhizoctonia solani*). Apply as an in-furrow spray at planting.	R4
Iprodione (Rovral)	2	Curative	NR	A	ALL	Registered in potatoes for control of Sclerotinia Rot (*Sclerotinia sclerotiorum*), Target Spot / Early Blight (*Alternaria solani*) and Hypocotyl Rot / **Black Scurf** (*Rhizoctonia solani*). Apply as an in-furrow spray at planting, ensuring good coverage of seed material and planting furrow.	R4
Metham Sodium	-	Soil Fumigant	NR	A	ALL	Registered in food crops as a pre-plant fumigant for control of fungus diseases including ***Rhizoctonia***, *Pythium*, *Fusarium*, *Phytophthora*, *Verticillium*, *Sclerotinia* and Club Root of crucifers. Applied as a soil injection, soil surface spray in front of a rotary tiller or through approved trickle irrigation systems.	R4
Pencycuron (Monceren 125 DS) Gowan	20	Protectant	NR	A	ALL	Registered in potatoes for control of **Black Scurf** (*Rhizoctonia solani*). Apply evenly to seed potatoes at planting.	R4
Penflufen (Emesto Prime) Bayer	7	Protectant	NR	A	ALL	Registered in potatoes for control of **Black Scurf** / **Rhizoctonia Root Rot** (*Rhizoctonia solani*). Apply once as an in-furrow spray at planting.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Quintozene (Terrachlor)	14	Protectant	28 NG	A	ALL	Registered in potato for control of **Black Scurf** (*Rhizoctonia solani*). Apply as an over-row spray prior to planting. Cultivate to 10-15 cm and cover with treated soil only. Maximum of 1 application per crop.	R4
Streptomyces lydicus WYEC108 (Actinovate) Novozymes Bioag	BM 02	Biological	NR	A	ALL	Registered in vegetables as a seed treatment for control of *Fusarium,* ***Rhizoctonia*** *& Pythium*.	R4
Tolclofos-Methyl (Rizolex) Sumitomo	14	Protectant & Curative	NR	A	ALL	Registered in potatoes for control of ***Rhizoctonia*** spp. Apply as in-furrow spray at time of planting.	R4
Fluopyram + Tebuconazole (Luna Experience) Bayer	7+3	Protectant & Curative		P		Registered for control of Yellow Sigatoka, Leaf Speckle and Cordana Leaf Spot in bananas. US registration for control of Powdery Mildew, Alternaria Leaf Spot, Gummy Stem Blight, Septoria, Botrytis, Cladosporium, Cercospora, Sclerotinia, Rust and Anthracnose and suppression of **Rhizoctonia** in almond, Brassica leafy vegetables, legume vegetables, melons and various fruit crops.	R3
Metalaxyl-M + Azoxystrobin (Uniform)	4+11	Protectant & Curative		P		Registered for control of **Rhizoctonia Root Rot** in barley and wheat and permitted for control of Pythium and **Rhizoctonia** in beetroot.	R4
Thiophanate-Methyl + Etridiazole (Banrot)	1+14	Protectant		P		Registered for control of *Pythium, Phytophthora,* ***Rhizoctonia*** and *Thielaviopsis* in container grown ornamentals and in ground bedding plants as a post plant soil drench.	R4
Thiram + Thiabendazole (P-Pickel T)	1+M3	Protectant		P		Registered as a seed treatment for control of ***Fusarium*** and *Pythium* seedling root rots (*Macrophomina* spp.) in faba beans.	R2

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Sclerotinia Rot (*Sclerotinia sclerotiorum & S.minor*) **Priority: Moderate**							
Sclerotinia Rot is rated as a moderate priority. It is a soil-borne disease that can be difficult to control. Sclerotinia is favoured by moist conditions and is often more severe under overhead irrigation. Spores can survive in the soil for long periods and the disease has a wide host range, reducing the effectiveness of crop rotation in reducing infection levels. Fungicides are effective in controlled Sclerotinia provided that application is timely. Long crop rotations with non-susceptible hosts will assist, as well as destruction of crop residues and careful irrigation management.							
Boscalid (Filan) BASF	7	Protectant	7	A	ALL	Registered in root and tuber vegetables for control of **Sclerotinia Rot** (*Sclerotinia minor*, *S. sclerotorium*). Apply as a program of 2 foliar sprays commencing before the disease has developed in crop. Use a retreatment interval of 7-14 days. Maximum of 4 applications per crop.	R4
Dazomet (Basamid)	8F	Soil Fumigant	NR	A	ALL	Pre-plant fumigant in seed beds for control of soil fungi including *Pythium*, *Phytophthora*, ***Sclerotinia***, *Sclerotium*, *Rhizoctonia*, *Verticillium*, *Plasmodiophora*, *Armillaria* and *Fusarium* spp. Apply granules to the soil surface and incorporate and seal the soil surface immediately. Do not plant into soil until a positive germination test has been conducted.	R4
Fluazinam	29	Protectant	14 NG	A	ALL	Registered in potatoes for control of Late Blight (*Phytophthora infestans*) and **Sclerotinia** (*Sclerotinia* spp.) Apply as a foliar spray before disease becomes established. Use a retreatment interval of 7-10 days. Maximum number of treatments per crop not specified.	R4
Iprodione (Rovral)	2	Curative	NR	A	ALL	Registered in potatoes for control of **Sclerotinia Rot** (*Sclerotinia sclerotiorum*), Target Spot / Early Blight (*Alternaria solani*) and Hypocotyl Rot / Black Scurf (*Rhizoctonia solani*). Apply 2 sprays, once immediately before and once immediately after hilling up. Concentrate the spray at the base of the stems and surrounding soil surface. Maximum of 4 applications per crop.	R4
Metham Sodium	-	Soil Fumigant	NR	A	ALL	Registered in food crops as a pre-plant fumigant for control of fungus diseases including *Rhizoctonia*, *Pythium*, *Fusarium*, *Phytophthora*, *Verticillium*, ***Sclerotinia*** and Club Root of crucifers. Applied as a soil injection, soil surface spray in front of a rotary tiller or through approved trickle irrigation systems.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Procymidone (Sumisclex)	2	Protectant	21	A	ALL	Registered in potatoes for control of **Sclerotinia** (*Sclerotinia minor*) and Target Spot (*Alternaria solani*). Apply as a foliar spray commencing when conditions favour the disease. Use a retreatment interval of 10 days. Maximum of 4 applications per crop.	R4
Pydiflumetofen + Fludioxonil (Miravis Prime) Syngenta	7+12	Protectant	14 NG	A	ALL	Registered in potato for control of **White Mould** (*Sclerotinia sclerotiorum*), Grey Mould (*Botrytis cinerea*) and Early Blight (*Alternaria solani*). Apply as a foliar spray as part of a protectant fungicide program. Use a retreatment interval of 7-14 days. Maximum of 2 applications per crop.	R4
Bacillus amyloliquefaciens strain QST713 (Serenade Prime) Bayer	BM02	Biological	NR	P-A	ALL	Registered in potatoes for suppression of Black Scurf / Rhizoctonia Root Rot (*Rhizoctonia solani*). Registered in vegetables for application to soil to improve bioavailability of soil resources to horticultural crops.	R4
Penthiopyrad (Fontelis) Corteva	7	Protectant	7	P-A	ALL	Registered in potatoes for control of Early Blight (*Alternaria* spp.) and Powdery Mildew (*Erisiphe* spp.) Registered for control of **Sclerotinia** in brassica vegetables, brassica lefy vegetables and leafy vegetables.	R4
Pydiflumetofen + Difenoconazole (Miravis Duo) Syngenta	7+3	Protectant & Curative	1 NG	P-A	ALL	Registered in root & tuber vegetables, including potatoes, for control of Early Blight / Target Spot (*Alternaria* spp.), Powdery Mildew (*Erysiphe* spp., *Oidium* spp.) and Cercospora Leaf Spot (*Cercospora* spp.) Canadian registration for control of **Sclerotinia** in potato, root vegetables, tuberous and corm vegetables and fruiting vegetables.	R3
Aureobasidium pullulans Strain DSM 14940 & DSM 14941 (Botector) Nufarm	-	Biological / Protectant	NR	P	ALL	Registered for control of Botrytis and other diseases in grapes, berries and fruiting vegetables, including the suppression of ***Sclerotinia* spp.** in berries.	R4
Azoxystrobin + Oxathiapiprolin (Orondis Flexi) Syngenta	11+49	Protectant & Curative		P		Registered for suppression of **Sclerotinia** in brassica vegetables, cucurbits, endive, leafy vegetables and lettuce.	-

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Cyprodinil + Fludioxonil (Switch) Syngenta	9+12	Protectant		P		Registered for control of **Sclerotinia** in capsicum, green beans, garden peas, snow peas, sugar snap peas, leafy vegetables, lettuce, nursery stock and ornamentals.	R3
Fluopyram + Tebuconazole (Luna Experience) Bayer	7+3	Protectant & Curative		P		Registered for control of Yellow Sigatoka, Leaf Speckle and Cordana Leaf Spot in bananas. US registration for control of **Sclerotinia** in brassica leafy greens and sunflowers.	R4
Fluopyram + Trifloxystrobin (Luna Sensation) Bayer	7+11	Protectant & Curative		P		Registered for control of **Sclerotinia** in lettuce.	R4
Mandestrobin (Intuity) Sumitomo	11	Protectant		P		Registered for control of White Mould (***Sclerotinia* spp.**) in green beans and lettuce.	R4
Prothioconazole + Tebuconazole (Prosaro) Bayer	3	Protectant		P		Registered for control of **Sclerotinia** and other diseases in canola and pyrethrum.	R3
Verticillium Wilt (*Verticillium dahliae*) **Priority: Moderate**							
Verticillium Wilt is rated as a moderate priority. It is a soil-borne disease that can cause large yield losses. The fungus is very persistent in the soil and is difficult to manage using conventional disease control measures. General farm hygiene, variety selection and promotion of robust healthy crops through irrigation and nutrition management are critical strategies.							
1,3-Dichloropropene + Chloropicrin + (Telone C-35)	8B	Soil Fumigant	NR	A	ALL	Registered in vegetables 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.***	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Dazomet (Basamid)	8F	Soil Fumigant	NR	A	ALL	Pre-plant fumigant in seed beds for control of soil fungi including *Pythium*, *Phytophthora*, *Sclerotinia*, *Sclerotium*, *Rhizoctonia*, ***Verticillium***, *Plasmodiophora*, *Armillaria* and *Fusarium* spp. Apply granules to the soil surface and incorporate and seal the soil surface immediately. Do not plant into soil until a positive germination test has been conducted.	R4
Metham Sodium	-	Soil Fumigant	NR	A	ALL	Registered in food crops as a pre-plant fumigant for control of fungus diseases including *Rhizoctonia*, *Pythium*, *Fusarium*, *Phytophthora*, ***Verticillium***, *Sclerotinia* and Club Root of crucifers. Applied as a soil injection, soil surface spray in front of a rotary tiller or through approved trickle irrigation systems.	R4
Bacillus amyloliquefaciens strain QST713 (Serenade Prime) Bayer	BM02	Biological	NR	P-A	ALL	Registered in potatoes for suppression of Black Scurf / Rhizoctonia Root Rot (*Rhizoctonia solani*). Registered in vegetables for application to soil to improve bioavailability of soil resources to horticultural crops.	R4
Fusarium Dry Rot (*Fusarium* spp.) **Priority: Low**							
Fusarium Dry Rot is rated as a low priority although it is considered of moderate importance in Tasmania. It is a persistent seed and soil-borne disease that is favoured by extended dry, hot conditions. Management of the disease centres around bruise management to reduce mechanical damage during harvest and storage handling, post-harvest fungicides, and controlled storage conditions.							
1,3-Dichloropropene + Chloropicrin + (Telone C-35)	8B	Soil Fumigant	NR	A	ALL	Registered in vegetables 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.***	R4
Dazomet (Basamid)	8F	Soil Fumigant	NR	A	ALL	Pre-plant fumigant in seed beds for control of soil fungi including *Pythium*, *Phytophthora*, *Sclerotinia*, *Sclerotium*, *Rhizoctonia*, *Verticillium*, *Plasmodiophora*, *Armillaria* and ***Fusarium* spp.** Apply granules to the soil surface and incorporate and seal the soil surface immediately. Do not plant into soil until a positive germination test has been conducted.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Fludioxonil (Maxim 100 FS) Syngenta	12	Protectant	NR	A	ALL	Registered as a seed treatment in potatoes for control of Black Dot (*Colletotrichum coccodes*), Black Scurf (*Rhizoctonia solani*), **Fusarium Dry Rot** (*Fusarium* spp.), Silver Scurf (*Helminthosporium solani*) and suppression of seed borne Common Scab (*Streptomyces* spp.) Apply to the seed potato at or prior to planting or prior to storage, ensuring even distribution over the seed.	R4
Fludioxonil + Sedaxane (Vibrance Premium) Syngenta	12+7	Protectant	NR	A	ALL	Registered as a seed treatment in potatoes for control of Black Dot (*Colletotrichum coccodes*), Black Scurf (*Rhizoctonia solani*), **Fusarium Dry Rot** (*Fusarium* spp.), Gangrene (*Phoma exigua*), Silver Scurf (*Helminthosporium solani*) and suppression of seed borne Common Scab (*Streptomyces* spp.) Apply to the seed potato at or prior to planting or prior to storage, ensuring even distribution over the seed.	R4
Imazalil (Magnate 750 WSP)	3	Protectant & Curative	NR	A	ALL	Registered in potato tubers for control of Silver Scurf (*Helminthosporim solani*), Gangrene (*Phoma exigua*) and **Dry Rot** (*Fusarium* spp.) Apply as a mist over the potatoes on the conveyor prior to storage.	R4
Metham Sodium	-	Soil Fumigant	NR	A	ALL	Registered in food crops as a pre-plant fumigant for control of fungus diseases including *Rhizoctonia*, *Pythium*, ***Fusarium***, *Phytophthora*, *Verticillium*, *Sclerotinia* and Club Root of crucifers. Applied as a soil injection, soil surface spray in front of a rotary tiller or through approved trickle irrigation systems.	R4
Streptomyces lydicus WYEC108 (Actinovate) Novozymes Bioag	BM 02	Biological	NR	A	ALL	Registered in vegetables as a seed treatment for control of ***Fusarium***, *Rhizoctonia & Pythium*.	R4
Thiabendazole (Tecto)	1	Protectant	NR	A	ALL	Registered in potatoes for control of **Dry Rot** (*Fusarium* spp.), Gangrene (*Phoma exigua*) and Silver Scurf (*Helminthosporium solani*). Apply as a mist over the potatoes on the conveyor prior to storage.	R4
Bacillus amyloliquefaciens strain QST713 (Serenade Prime) Bayer	BM02	Biological	NR	P-A	ALL	Registered in potatoes for suppression of Black Scurf / Rhizoctonia Root Rot (*Rhizoctonia solani*). Registered in vegetables for application to soil to improve bioavailability of soil resources to horticultural crops.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Bacterial Wilt (*Ralstonia solanacearum*) **Priority: Low**							
Bacterial Wilt is rated as a low priority and has been detected in all states except Tasmania. It is a soil-borne bacterium that enters the root system through wounds caused by mechanical damage and soil pests. It is critical to control the spread via machinery, people and infected produce. Use of crop rotation, disease-free planting material and general farm hygiene are critical for reducing the impact of Bacterial Wilt.							
Chlorine	-	Sanitiser	NR	A	ALL	Registered as a sanitiser / post-harvest treatment for control of bacteria and fungi. Spray or dip harvested produce, minimum of 30 seconds contact time with treated water.	R4
Iodine	-	Sanitiser	NR	A	ALL	Registered in root crops as a sanitiser / post-harvest treatment for control of bacteria and fungi. Dip harvested produce, minimum of 1 minute contact time with treated water.	R4
Peroxyacetic Acid	M	Sanitiser / Post-Harvest Treatment	NR	A	ALL	Registered as a sanitiser / post-harvest treatment for control of bacteria. Spray or dip harvested produce.	R4
Copper	M1	Protectant	1	P-A	ALL	Registered in potatoes for control of Target Spot and Irish Blight. Registered for control of Bacterial Spot in stone fruit, brassica vegetables, cucurbits, peas and tomatoes.	R4
Acibenzolar-S-Methyl (Actigard Plant Activator) Syngenta	P01	Protectant	NR	P		Not registered in Australia, but Bion contains the same active ingredient and is registered as a seed dressing in cotton for suppression of Fusarium Wilt and Black Root Rot in cotton. US registration for control of various bacterial diseases in brassica leafy vegetables, citrus, cucurbits, low growing berries, bulb onions, pome fruit and tomato.	R4
Bacillus amyloliquefaciens (Serenade Opti) Bayer	BM 02	Biological	NR	P		Registered for suppression of Bacterial Spot in tomatoes, capsicums and chillies.	R4
Bacillus amyloliquefaciens strain MBI 600 (Serifel) BASF	BM 02	Biological	NR	P		Registered for control of Botrytis in grapevines, strawberries and berries. US registration for control of bacterial diseases in root & tuber vegetables (except sugar beet), tree nuts, berries, fruiting vegetables, leafy vegetables and stone fruit.	R4

4.2 Insect and mite pests of potato

4.2.1 Insect and mite pest priorities

Common name	Scientific name
High	
Potato Moth	*Phthorimaea operculella*
Tomato Potato Psyllid	*Bactericera cockerelli*
Moderate	
Tomato Thrips	*Frankliniella schultzei*
Onion Thrips	*Thrips tabaci*
Cutworms	*Agrotis* spp.
African Black Beetle	*Heteronychus arator*
Black Peach Aphid	*Brachycaudus persicae*
Green Peach Aphid	*Myzus persicae*
Potato Aphid	*Macrosiphum euphorbiae*
Red Legged Earth Mite	*Halotydeus destructor*
White-Fringed Weevil	*Naupactus leucoloma*
Rutherglen Bug	*Nysius vinitor*
Root Knot Nematode	*Meloidogyne* spp.
Low	
Garden Weevil	*Phlyctinus callosus*
Black Field Cricket	*Teleogryllus commodus*
Australian Mole Cricket	*Gryllotalpa australis*
Cotton Bollworm / Corn Earworm	*Helicoverpa armigera*
Native Budworm	*Helicoverpa punctigera*
Silverleaf Whitefly	*Bemisia tabaci*
Potato Wireworm	*Hapatesus hirtus*
Lyriomyza Leafminer	*Liriomyza* spp.
Slugs & Snails	Gastropoda

The high priority insect pests identified through industry consultation were Potato Moth and Tomato Potato Psyllid. Available and potential products for these pests are listed in Section 4.2.2.

Soil insects can be highly damaging to root crops such as potato, and it is important to identify what species are causing crop damage. Sampling for soil insects is best conducted using a baiting technique, such as outlined on Page 44 of the Cotton Pest Management Guide[6].

Resistance to some insect groups has reduced control options despite a range of actives registered. Additionally, not all actives have broad registrations across Lepidoptera. Growers should not exceed the maximum number of applications permitted on the insecticide label.

Biological control involving other insects or fungal organisms in insect pest control is another option that need to be further evaluated. There are several identified biological control agents commercially available for pests in Australia.

Specific resistance management strategies[7] are available on the Croplife Australia website, including for management of Potato Moth / Tomato Leafminer in potatoes.

[6] www.cottoninfo.com.au/publications/cotton-pest-management-guide
[7] https://www.croplife.org.au/resources/programs/resistance-management/

4.2.2 Available and potential products for priority insects and mites

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

Availability		Regulatory risk (refer to Appendix 6)	
A	Available via either registration or permit approval	R1	Short-term risk: Critical concern over retaining access < 1 year
P	Potential - a possible candidate to pursue for registration or permit	R2	Medium-term risk: Maintaining access of significant concern <2-5 years
P-A	Potential, already approved in the crop for another use	R3	Long-term: Potential issues associated with use - Monitoring required < 5 years
		R4	No current risk / concerns

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 2025-26 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
Potato Moth (*Phthorimaea operculella*) **Priority: High**								
Potato Moth is rated as a high priority and it impacts on all potato growing regions. The larvae mine in foliage, stems and tubers of potatoes. The tops of infested plants can die prematurely leading to reduced yields. Tuber damage leads to loss of yield and marketability. Potato Moth should be managed using an Integrated Pest Management approach. Cultural measures include crop rotation, field hygiene, irrigation management and effective hilling techniques. Parasitic wasps and predators can also play a significant role in controlling populations. Insecticide use plays a relatively minor part in controlling Tuber Moth if attention is paid to other control measures.								
Acephate	1B	Contact	3	A	ALL	Registered in potatoes for control of **Potato Moth** / Tobacco Leafminer. Apply as a foliar spray when pest is present. Use a retreatment interval of 14-21 days. Maximum number of applications per crop not specified.	H Bee:H	R3
Bacillus thuringiensis subsp. kurstaki (DiPel)	11A	Biological	NR	A	ALL	Registered in vegetables for control of Lepidoptera. Time spraying to coincide with egg hatch. Treatments per season not limited.	VL Bee:VL	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Carbaryl	1A	Contact	3	A	ALL	Registered in potatoes for control of **Potato Moth**, Wingless Grasshopper, Green Vegetable Bug, Heliothis (Budworms), Leaf Eating Ladybird, Cutworms, European Earwig, Rutherglen Bug and Armyworms. Apply as a foliar spray at first sign of pest activity. Retreatment interval and maximum number of applications per crop not specified.	H Bee:H	R4
Chlorantraniliprole (Coragen) FMC	28	Ingestion	NR G:7	A	ALL	Registered in potatoes for control of Cotton Bollworm (*Helicoverpa armigera*), Native Budworm (*Helicoverpa punctigera*) and **Potato Moth** (*Phthorimaea operculella*). Apply as a foliar spray when larvae are still in the leaves of plants. Use a retreatment interval of 10-14 days. Maximum of 3 applications per crop, with no more than 2 consecutive applications.	L Bee:VL	R4
Cyantraniliprole (Benevia) FMC	28	Ingestion	7 NG	A	ALL	Registered in potatoes for control of Silverleaf Whitefly (*Bemisia tabaci*), Cotton Bollworm (*Helicoverpa armigera*), Native Budworm (*Helicoverpa punctigera*) and **Potato Tuber Moth** (*Phthorimaea operculella*), and suppression of Green Peach Aphid (*Myzus persicae*) and Plague Thrips (*Thrips imaginis*). Apply as a foliar spray when larvae are still in the leaves of plants. Use a retreatment interval of 7-10 days. Maximum of 3 applications per crop, with no more than 2 consecutive applications.	M Bee:VH	R4
Flubendiamide (Belt) Bayer	28	Ingestion	1	A	ALL	Registered in root and tuber vegetables including beetroot for control of Diamondback Moth (*Plutella xylostella*), Cabbage White Butterfly (*Pieris rapae*), Cluster Caterpillar (*Spodoptera litura*), **Potato Moth** (*Phthorimaea operculella*) and Heliothis (*Helicoverpa* spp.) Apply as a foliar spray when young larvae are first detected in leaves. Use a retreatment interval of 7-14 days. Maximum of 3 applications per crop.	L-M Bee:L	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Garlic + Chilli + Pyrethrins + Piperonyl Butoxide	3A	Contact	1	A	ALL	Registered in vegetables for control of Ants, Aphids, Caterpillars, Earwigs, Whitefly, Thrips and Leafhoppers. Suitable for organic growers. Apply as a foliar spray when pest is evident. Use a retreatment interval of 14-21 days. Maximum number of applications per crop not specified.	VH Bee:H	R4
Methomyl	1A	Contact	NR	A	ALL	Registered in potatoes for control of **Potato Moth**. Apply as a foliar spray when pest first appears. Retreatment interval and maximum number of applications per crop not specified.	H Bee:H	R2
Permethrin (Ambush)	3A	Contact	2	A	ALL	Registered in potatoes for control of **Potato Moth** (*Phthorimaea operculella*). Apply as a foliar spray commencing in early staged of the infestation. Use a retreatment interval of 14-21 days. Maximum number of applications per crop not specified.	VH Bee:H	R3
Spinetoram (Success Neo) Corteva	5	Ingestion	3	A	ALL	Registered in root & tuber vegetables, including potatoes, for control of *Helicoverpa* spp., Light Brown Apple Moth, Loopers, **Potato Moth** and Tomato Potato Psyllid. Apply as a foliar spray when larvae are detected in leaves. Use a retreatment interval of 7-14 days. Maximum of 4 applications per crop.	M Bee:H	R4
Spinosad (Entrust Organic) Corteva	5	Ingestion	3 G:14	A	ALL	Registered in root & tuber vegetables, including potatoes, for control of Light Brown Apple Moth, Loopers, *Helicoverpa* spp. and **Potato Moth**. Apply as a foliar spray when larvae are detected in leaves. Use a retreatment interval of 7-14 days. Maximum of 4 applications per crop.	L Bee:L	R4
Emamectin (Proclaim Opti) Syngenta	6	Ingestion		P		Registered for control of Diamondback Moth, Cabbage White Butterfly, Heliothis, Cluster Caterpillar and Loopers in root & tuber vegetables (except potato).	M Bee:H	R3
Indoxacarb (Avatar eVo) FMC	22A	Ingestion		P		Registered for control of various Lepidoptera in brassica vegetables, leafy vegetables, Chinese leafy vegetables, fruiting vegetables, celery, cucurbits, sweet corn and pome fruit.	L Bee:H	R3
Isocycloseram (Simodis Plinazolin) Syngenta	30	Ingestion		P		Registered for control of various Lepidoptera in brassica vegetables, brassica leafy vegetables, cucurbits and fruiting vegetables.	H Bee:H	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Methoxyfenozide (Prodigy) Corteva	18	Insect Growth Regulator		P		Registered for control of various Lepidoptera in almonds, pome fruit, avocado, blueberry, citrus, coffee, custard apple, grapevines, kiwifruit, longan, lychee, macadamia, tomatoes, peppers, eggplant and okra.	VL Bee:VL	R4
Tomato Potato Psyllid (*Bactericera cockerelli*) **Priority: High**								
Tomato Potato Psyllid is rated as a high priority. It is a small sucking pest that has established in Australia in recent years. It can vector the Zebra Chip bacterial disease of potato although this has not been detected in Australia yet. It can also cause direct damage to crops, including yellowing, stunting and wilting, which can lead to impacts on tuber yield and quality in severe cases. Tomato Potato Psyllid first appeared in WA, and anecdotal evidence suggests that beneficial insects are increasing effective at reducing populations over time. The use of integrated pest management principles is critical for managing the pest over the longer term.								
Abamectin PER84249	6	Ingestion	14 NG	A	ALL (excl. VIC)	Permitted in potato for control of **Tomato Potato Psyllid** (*Bactericera cockerelli*). Apply as a foliar spray when pest is present. Use a retreatment interval of 7-14 days. Maximum of 5 applications per crop.	M Bee:H	R3
Cyantraniliprole (Benevia) FMC PER84805	28	Ingestion	14 NG	A	ALL (excl. VIC)	Permitted in potatoes for control of **Tomato Potato Psyllid** (*Bactericera cockerelli*). Apply as a foliar spray immediately upon discovery of the pest. Use a retreatment interval of 7-10 days. Maximum of 2 applications per crop.	M Bee:VH	R4
Lambda-Cyhalothrin (Karate Zeon) PER84249	3A	Contact	7 NG	A	ALL (excl. VIC)	Permitted in potato for control of **Tomato Potato Psyllid** (*Bactericera cockerelli*). Apply as a foliar spray when numbers are excessive. Retreatment interval and maximum number of applications per crop not specified.	VH Bee:H	R4
Methomyl PER84249	1A	Contact	NR	A	ALL (excl. VIC)	Permitted in potato for control of **Tomato Potato Psyllid** (*Bactericera cockerelli*). Apply as a foliar spray when pest first appears. Retreatment interval and maximum number of applications per crop not specified.	H Bee:H	R2

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Spinetoram (Success Neo) Corteva	5	Ingestion	3	A	ALL	Registered in root & tuber vegetables, including potatoes, for control of *Helicoverpa* spp., Light Brown Apple Moth, Loopers, Potato Moth and **Tomato Potato Psyllid**. Apply as a foliar spray when pest is present. Use up to 4 consecutive applications with a retreatment interval of 7 days. Maximum of 4 applications per crop.	M Bee:H	R4
Sulfoxaflor (Transform) Corteva	4C	Contact & Ingestion	7	A	ALL	Registered in root & tuber vegetables for control of Green Peach Aphid and suppression of **Tomato Potato Psyllid** and Rutherglen Bug. Apply as a foliar spray immediately when pests are detected. Use a retreatment interval of 7-10 days. Maximum of 4 applications per crop, with no more than 2 consecutive applications.	M Bee:VH	R4
Spirotetramat (Movento) Bayer PER84245	23	Ingestion	7	A	ALL	Permitted in potatoes for control of **Tomato Potato Psyllid** (*Bactericera cockerelli*). Apply as a foliar spray targeting the nymph stage of the pest. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop, with no more than 2 consecutive applications.	M Bee:VL	R4
Pymetrozine (Chess) Syngenta	9B	Contact & Ingestion	NR	P-A	ALL	Registered in potatoes for control of Green Peach Aphid (*Myzus persicae*). US registration for suppression of **Tomato Potato Psyllid** in potatoes.	L Bee:VL	R3
Lufenuron (Nuron)	15	Ingestion		P		NZ registration for control of **Tomato Potato Psyllid** in potatoes.	-	R4
Novaluron (Rimon)	15	Ingestion		P		US registration for control of **Tomato Potato Psyllid** in potatoes.	-	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Tomato Thrips (*Frankliniella schultzei*) **Onion Thrips** (*Thrips tabaci*) **Priority: Moderate**								
Western Flower Thrips and Potato Thrips are rated as a moderate priority. They are a vector for Tomato Spotted Wilt Virus. Cultural measures including field hygiene, as well as avoiding disruptive insecticide early season to preserve beneficials and crop monitoring are important measures to support strategic insecticide controls.								
Beauveria bassiana (Velifer) BASF	UNF	Biological	NR	A	ALL	Registered in protected vegetables and ornamentals for suppression of Western Flower Thrips, **Onion Thrips**, Greenhouse Whitefly, Silverleaf Whitefly, Sweet Potato Whitefly, Green Peach Aphid and Two-Spotted Spider Mites. Apply as a foliar spray when pests are first detected or above economic threshold. Use a retreatment interval of 3-14 days. Maximum number of applications per crop not specified.	L Bee:L	R4
Dimethoate	1B	Contact	14	A	ALL	Registered in potatoes for control of Aphids, Jassids, Green Vegetable Bug, **Thrips** and Wingless Grasshopper. Apply as a foliar spray when pests appear. Retreatment interval and maximum number of applications per crop not specified.	H Bee:H	R3
Garlic + Chilli + Pyrethrins + Piperonyl Butoxide	3A	Contact	1	A	ALL	Registered in vegetables for control of Ants, Aphids, Caterpillars, Earwigs, Whitefly, **Thrips** and Leafhoppers. Suitable for organic growers. Apply as a foliar spray when pest is evident. Use a retreatment interval of 14-21 days. Maximum number of applications per crop not specified.	VH Bee:H	R4
Methomyl PER82428	1A	Contact	7	A	ALL	Permitted in root & tuber vegetables for control of *Helicoverpa* spp., Cucumber Moth, Cluster Caterpillar, Loopers, Webworm, Rutherglen Bug and **Thrips** including Western Flower Thrips. Apply as a foliar spray when pest first appears. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop.	H Bee:H	R2

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Phorate (Thimet)	1B	Contact	91	A	ALL	Registered in potatoes for control of Aphids, **Thrips**, Jassids, Two-Spotted Mite and Wireworm. Distribute the granules evenly in the furrow or band granules on each side of the row at planting time.	H Bee:H	R2
Potassium Salts of Fatty Acids (Natrasoap)	-	Contact	NR	A	ALL	Registered in vegetables for control of Aphids, **Thrips**, Mealybug, Two Spotted Mites, Spider Mite and Whitefly. Apply as a foliar spray as need. Use a retreatment interval of 5-7 days. Maximum number of applications per crop not specified.	L Bee:L	R4
Cyantraniliprole (Benevia) FMC	28	Ingestion	7 NG	P-A	ALL	Registered in potatoes for control of Silverleaf Whitefly (*Bemisia tabaci*), Cotton Bollworm (*Helicoverpa armigera*), Native Budworm (*Helicoverpa punctigera*) and Potato Tuber Moth (*Phthorimaea operculella*), and suppression of Green Peach Aphid (*Myzus persicae*) and Plague Thrips (*Thrips imaginis*).	M Bee:VH	R4
Spinetoram (Success Neo) Corteva	5	Ingestion	3	P-A	ALL	Registered in root & tuber vegetables, including potatoes, for control of *Helicoverpa* spp., Light Brown Apple Moth, Loopers, Potato Moth and Tomato Potato Psyllid.	M Bee:H	R4
Spinosad (Entrust Organic) Corteva	5	Ingestion	3 G:14	P-A	ALL	Registered in root & tuber vegetables, including potatoes, for control of Light Brown Apple Moth, Loopers, *Helicoverpa* spp. and Potato Moth.	L Bee:L	R4
Acetamiprid + Pyriproxyfen (Trivor) Adama	4A+7C	Ingestion / IGR		P		Registered for control of Kellys Citrus Thrips in citrus.	M Bee:H	R2
Diafenthiuron + Cyantraniliprole (Minecto Forte) Syngenta	12A+28	Ingestion & Contact		P		Registered for control of various pests including suppression of Western Flower Thrips, Tomato Thrips and Plague Thrips in cucurbits and fruiting vegetables.	M Bee:VH	R4

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	R4
Cutworms (*Agrotis* spp.) **Priority: Moderate**								
Cutworms are rated as a moderate priority, with Tasmania reported as the most affected region. Cutworms are caterpillars that attack seedling crops by chewing through leaves and stems at ground level. Cutworms can be a pest of emerging seedlings but the incidence of this pest causing economic damage in older crops is rare. This pest is typically found along field margins that adjoin pastures or where crops have been sown into recently sprayed out weedy fallows. Soil pests can reduce plant establishment, row density and vigour. Symptoms can be confused with other establishment problems and may be worse if seedling development is slow due to climate or other factors. Soil pests predominantly feed on germinating seed and seedling roots, resulting in poor establishment. Bait sampling prior to planting should be used to determine their presence. Clean fallows (free from weeds) generally cause pest insect numbers to decline due to a lack of food.								
Carbaryl	1A	Contact	3	A	ALL	Registered in potatoes for control of Potato Moth, Wingless Grasshopper, Green Vegetable Bug, Heliothis (Budworms), Leaf Eating Ladybird, **Cutworms**, European Earwig, Rutherglen Bug and Armyworms. Apply as a foliar spray at first sign of pest activity. Retreatment interval and maximum number of applications per crop not specified.	H Bee:H	R4
Alpha-Cypermethrin PER12612	3A	Contact	14 G:35	P-A	WA & TAS	Permitted in potatoes for control of Garden Weevil (*Phlyctinus callosus*). Registered for control of **Cutworms** in winter cereals, various pulse crops and grapevines.	VH Bee:H	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Methomyl PER82428	1A	Contact	7	P-A	ALL	Permitted in root & tuber vegetables for control of *Helicoverpa* spp., Cucumber Moth, Cluster Caterpillar, Loopers, Webworm, Rutherglen Bug and Thrips including Western Flower Thrips. Registered for control of **Cutworms** in tobacco.	H Bee:H	R2
Trichlorfon (Lepidex)	1B	Contact	2	P-A	ALL	Registered in vegetables for control of Cabbage White Butterfly, Cabbage Moth, Rutherglen Bug and Green Vegetable Bug. Registered for control of **Cutworms** in strawberries, beans, celery, crucifers, cucurbits, lettuce, peas, potatoes and tomato.	H Bee:H	R3
Bifenthrin (Talstar)	3A	Contact		P		Registered as an in-furrow spray at planting for control of Wireworms in cotton and sugarcane. US registration for control of **Cutworms** in field corn, sweet corn, succulent peas & beans, cilantro, dried beans & peas, tobacco and peanuts.	VH Bee:H	R3
Broflanilide (Cimegra) BASF	30	Contact & Ingestion		P		Registered in brassica vegetables and Chinese cabbage for control of Diamondback Moth. Broadspectrum activity on soil-dwelling pests although specific effect on cutworms is currently unknown.	H Bee:VH	R4
Chlorantraniliprole (Acelepryn) Syngenta	28	Ingestion		P		Registered for control of **Black Cutworm** in turf. Note that rate in turf is higher than in vegetables.	L Bee:VL	R4
Clothianidin + Imidacloprid (Poncho Plus Seed Treatment) Bayer	4A	Contact & Ingestion		P		Registered for control of **Cutworms** as seed treatment in canola, forage brassicas, maize, sweet corn, sorghum, sunflower and pastures.	M Bee:M	R2
Cyantraniliprole + Thiamethoxam (Spinner) Syngenta	28+4A	Contact & Ingestion		P		Registered for control of **Black Cutworm** in turf.	M Bee:VH	R2
Indoxacarb (Provaunt) Syngenta	22A	Ingestion		P		Registered for control of **Black Cutworm** in turf.	L Bee:H	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
African Black Beetle (*Heteronychus arator*) **Priority: Moderate**								
African Black Beetle is rated as a moderate pest. It is a soil-borne pest, with the larvae causing direct feeding damage to potato tubers. The adults can also cause damage by feeding on young potato seedlings. The loss of chlorpyrifos has made control more challenging as there are no current insecticide options and cultural controls are not reliable.								
Broflanilide (Cimegra) BASF	30	Contact & Ingestion		P		Registered in brassica vegetables and Chinese cabbage for control of Diamondback Moth. Broadspectrum activity on soil-dwelling pests although specific effect on beetles is currently unknown.	H Bee:VH	R4
Chlorantraniliprole (Acelepryn) Syngenta	28	Ingestion		P		Registered for control of **African Black Beetle** in turf. Note that rate in turf is higher than in vegetables.	L Bee:VL	R4
Cyantraniliprole + Thiamethoxam (Spinner) Syngenta	28+4A	Contact & Ingestion		P		Registered for control of **African Black Beetle** in turf.	M Bee:VH	R2
Tetraniliprole (Vayego) Bayer	28	Ingestion		P		Registered for control of Sigastus Weevil in macadamia and control of Apple Weevil, Fuller's Rose Weevil and Garden Weevil in pome fruit and stone fruit.	M Bee:VH	R4
Black Peach Aphid (*Brachycaudus persicae*) **Green Peach Aphid** (*Myzus persicae*) **Potato Aphid** (*Macrosiphum euphorbiae*) **Priority: Moderate**								
Black Peach Aphid, Green Peach Aphid and Potato Aphid are rated as a moderate priority. Aphids are a sucking pest that cause direct feeding damage to above ground plant parts and can create problems with honeydew secretion in severe infestations. They also vector Potato Virus Y and Potato Leaf Roll Virus. An integrated pest management approach should be used to ensure long term effective control of aphids in potatoes.								
Acetamiprid	4A	Contact & Ingestion	7 NG	A	ALL	Registered in potatoes for control of **Green Peach Aphid** (*Myzus persicae*). Apply as a foliar spray when infestation reaches economic threshold. Retreatment interval not specified. Maximum of 3 applications per crop.	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	7	A	ALL	Registered in potato for control of **Green Peach Aphid** (*Myzus persicae*), Cabbage Aphid (*Brevicoryne brassicae*), Currant Lettuce Aphid (*Nasonovia ribis-nigri*) and Cotton Aphid / Melon Aphid (*Aphis gossypii*) and suppression of Silverleaf Whitefly (*Bemisia tabaci*). Apply. Apply as a foliar spray, commencing when economic thresholds are reached. Use a retreatment interval of 14 days. Maximum of 4 applications per crop, with no more that 2 consecutive applications.	L Bee:L	R4
Beauveria bassiana (Velifer) BASF	UNF	Biological	NR	A	ALL	Registered in protected vegetables and ornamentals for suppression of Western Flower Thrips, Onion Thrips, Greenhouse Whitefly, Silverleaf Whitefly, Sweet Potato Whitefly, **Green Peach Aphid** and Two-Spotted Spider Mites. Apply as a foliar spray when pests are first detected or above economic threshold. Use a retreatment interval of 3-14 days. Maximum number of applications per crop not specified.	L Bee:L	R4
Cyantraniliprole (Benevia) FMC	28	Ingestion	7 NG	A	ALL	Registered in potatoes for control of Silverleaf Whitefly (*Bemisia tabaci*), Cotton Bollworm (*Helicoverpa armigera*), Native Budworm (*Helicoverpa punctigera*) and Potato Tuber Moth (*Phthorimaea operculella*), and suppression of **Green Peach Aphid** (*Myzus persicae*) and Plague Thrips (*Thrips imaginis*). Apply as a foliar spray to a newly developing infestation. Use a retreatment interval of 7-10 days. Maximum of 3 applications per crop, with no more than 2 consecutive applications.	M Bee:VH	R4
Dimethoate	1B	Contact	14	A	ALL	Registered in potatoes for control of **Aphids**, Jassids, Green Vegetable Bug, Thrips and Wingless Grasshopper. Apply as a foliar spray when pests appear. Retreatment interval and maximum number of applications per crop not specified.	H Bee:H	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Flonicamid (Mainman) UPL	29	Ingestion	14 NG	A	ALL	Registered in potatoes for control of **Green Peach Aphid** (*Myzus persicae*), Melon Aphid (*Aphis gossypii*) and **Potato Aphid** (*Macrosiphum euphorbiae*). Apply as a foliar spray at first sign of pest infestation. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop.	M Bee:L	R4
Flupyradifurone (Sivanto Prime) Bayer	4D	Contact & Ingestion	7	A	ALL	Registered in potatoes for control of **Green Peach Aphid** (*Myzus persicae*) and Silverleaf Whitefly (*Bemisia tabaci*). Apply as a foliar spray when economic threshold is reached. Use a minimum retreatment interval of 7 days. Maximum of 2 applications per crop.	L Bee:VL	R4
Garlic + Chilli + Pyrethrins + Piperonyl Butoxide	3A	Contact	1	A	ALL	Registered in vegetables for control of Ants, **Aphids**, Caterpillars, Earwigs, Whitefly, Thrips and Leafhoppers. Suitable for organic growers. Apply as a foliar spray when pest is evident. Use a retreatment interval of 14-21 days. Maximum number of applications per crop not specified.	VH Bee:H	R4
Imidacloprid	4A	Contact & Ingestion	7 NG	A	ALL	Registered in potato for control of **Green Peach Aphid**. Apply as a foliar spray at first sign of pest infestation. Maximum of 1 application per crop.	M Bee:H	R2
Phorate (Thimet)	1B	Contact	91	A	ALL	Registered in potatoes for control of **Aphids**, Thrips, Jassids, Two-Spotted Mite and Wireworm. Distribute the granules evenly in the furrow or band granules on each side of the row at planting time.	H Bee:H	R2
Pirimicarb (Aphidex)	1A	Contact & Ingestion	2	A	ALL	Registered in potatoes for control of **Potato Aphid**. Apply as a foliar spray as needed. Retreatment interval not specified. Maximum of 2 non-consecutive applications per crop.	VL Bee:VL	R4
Potassium Salts of Fatty Acids (Natrasoap)	-	Contact	NR	A	ALL	Registered in vegetables for control of **Aphids**, Thrips, Mealybug, Two Spotted Mites, Spider Mite and Whitefly. Apply as a foliar spray as need. Use a retreatment interval of 5-7 days. Maximum number of applications per crop not specified.	L Bee:L	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Pymetrozine (Chess) Syngenta	9B	Contact & Ingestion	NR	A	ALL	Registered in potatoes for control of **Green Peach Aphid** (*Myzus persicae*). Apply as a foliar spray when monitoring indicates pest threshold has been reached. Use a minimum retreatment interval of 14 days. Maximum of 2 applications per crop.	L Bee:VL	R3
Spirotetramat (Movento) Bayer	23	Ingestion	7	A	ALL	Registered in potatoes for control of **Green Peach Aphid** (*Myzus persicae*) and Silverleaf Whitefly (*Bemisia tabaci*). Apply as a foliar spray when monitoring indicates pest threshold has been reached. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop.	M Bee:VL	R4
Sulfoxaflor (Transform) Corteva	4C	Contact & Ingestion	7	A	ALL	Registered in root & tuber vegetables for control of **Green Peach Aphid** and suppression of Tomato Potato Psyllid and Rutherglen Bug. Apply as a foliar spray immediately when pests are detected. Use a retreatment interval of 7-10 days. Maximum of 4 applications per crop, with no more than 2 consecutive applications.	M Bee:VH	R4
Dimpropyridaz (Efficon) BASF	UN	Ingestion		P		Registered for the control of **Green Peach Aphid** in brassica vegetables, leafy vegetables and brassica leafy vegetables.	M Bee:L	R4
Red Legged Earth Mite (*Halotydeus destructor*) **Priority: Moderate**								
Red Legged Earth Mite is rated as a moderate priority. They are a pest of regions with cool, wet winters and hot dry summers. Red Legged Earth Mites only feed on foliage for short periods of time and they spend 90% of their time on the soil surface. They are most damaging to emerging crops and can cause significant reductions in plant populations. An integrated pest management approach should be used to ensure long term effective control of Red Legged Earth Mite in potatoes.								
1,3-Dichloropropene + Chloropicrin + (Telone C-35)	8B	Soil Fumigant	NR	P-A	ALL	Registered in vegetables 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.***	-	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Alpha-Cypermethrin PER12612	3A	Contact	14 G:35	P-A	WA & TAS	Permitted in potatoes for control of Garden Weevil (*Phlyctinus callosus*). Registered for control of **Red Legged Earth Mite** in canola, winter cereals, various pulse crops and pastures.	VH Bee:H	R3
White-Fringed Weevil (*Naupactus leucoloma*) **Priority: Moderate**								
White-Fringed Weevil is rated as a moderate priority. It is a soil-borne pest with the larvae causing devastating damage to roots and tubers. It is important to sample for the presence of White-Fringed Weevil prior to planting to determine the need for insecticide treatments at planting time.								
Fipronil (Regent)	2B	Contact	NR NG	A	ALL	Registered in potatoes for control of Wireworm, Mole Cricket and **White Fringed Weevil** (*Naupactus leucoloma*). Apply as a broadcast spray to the soil surface and incorporate to 15cm depth prior to planting.	M Bee:VH	R2
Alpha-Cypermethrin PER12612	3A	Contact	14 G:35	P-A	WA & TAS	Permitted in potatoes for control of Garden Weevil (*Phlyctinus callosus*).	VH Bee:H	R3
Indoxacarb (Avatar eVo) FMC	22A	Ingestion		P		Registered for control of **Weevils** in pome fruit and stone fruit.	L Bee:H	R3
Tetraniliprole (Vayego) Bayer	28	Ingestion		P		Registered for control of Sigastus Weevil in macadamia and control of Apple Weevil, Fuller's Rose Weevil and Garden Weevil in pome fruit and stone fruit.	M Bee:VH	R4
Rutherglen Bug (*Nysius vinitor*) **Priority: Moderate**								
Rutherglen Bug is rated as a moderate priority. They are a sporadic pest that will breed up on weeds adjacent to cropping areas. Large numbers can cause significant feeding damage to foliage by sucking the sap and depleting the crop of nutrients. Timely insecticide applications can be effective for controlling Rutherglen Bug although control options are limited.								
Carbaryl	1A	Contact	3	A	ALL	Registered in potatoes for control of Potato Moth, Wingless Grasshopper, Green Vegetable Bug, Heliothis (Budworms), Leaf Eating Ladybird, Cutworms, European Earwig, **Rutherglen Bug** and Armyworms. Apply as a foliar spray at first sign of pest activity. Retreatment interval and maximum number of applications per crop not specified.	H Bee:H	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Methomyl PER82428	1A	Contact	7	A	ALL	Permitted in root & tuber vegetables for control of *Helicoverpa* spp., Cucumber Moth, Cluster Caterpillar, Loopers, Webworm, **Rutherglen Bug** and Thrips including Western Flower Thrips. Apply as a foliar spray when pest first appears. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop.	H Bee:H	R2
Sulfoxaflor (Transform) Corteva	4C	Contact & Ingestion	7	A	ALL	Registered in root & tuber vegetables for control of Green Peach Aphid and suppression of Tomato Potato Psyllid and **Rutherglen Bug**. Apply as a foliar spray immediately when pests are detected. Use a retreatment interval of 7-10 days. Maximum of 4 applications per crop, with no more than 2 consecutive applications.	M Bee:VH	R4
Trichlorfon (Lepidex)	1B	Contact	2	A	ALL	Registered in vegetables for control of Cabbage White Butterfly, Cabbage Moth, **Rutherglen Bug** and Green Vegetable Bug. Apply as a foliar spray when pests are first seen. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	H Bee:H	R3
Flupyradifurone (Sivanto Prime) Bayer	4D	Contact & Ingestion	7	P-A	ALL	Registered in potatoes for control of Green Peach Aphid (*Myzus persicae*) and Silverleaf Whitefly (*Bemisia tabaci*). Registered for control of Macadamia Lace Bug in macadamia, Fruit Spotting Bugs in macadamia, tropical & sub-tropical fruits, inedible peel (excluding bananas, pineapple), and Olive Lace Bug in olives.	L Bee:VL	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Root Knot Nematode (*Meloidogyne* spp.) **Priority: Moderate**								
Root Knot Nematode is rated as a moderate priority. Root Knot Nematodes are microscopic soil-borne pests that attack roots and tubers. Infested plants show varying degrees of stunting, yellowing of leaves and wilting. Affected tubers have blisters or swellings, leading to a reduction in quality size and number of tubers. Infested potatoes can become more susceptible to Bacterial Wilt. Cultural measures such as crop rotation and good field hygiene are critical components of nematode management.								
1,3-Dichloropropene + Chloropicrin + (Telone C-35)	8B	Soil Fumigant	NR	A	ALL	Registered in vegetables 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.***	-	R4
Abamectin (Tervigo) Syngenta	N-2	Contact	NR	A	ALL	Registered in potato for control of **Root-Knot Nematode** (*Meloidogyne* spp.) Apply as an in-furrow spray at planting, followed by a second application as a banded spray over the row between 14 and 30 days after planting. Apply sufficient overhead irrigation immediately after planting to allow product to reach the root zone.	M Bee:H	R3
Dazomet (Basamid)	8F	Soil Fumigant	NR	A	ALL	Pre-plant fumigant in seed beds for control of soil fungi including *Pythium*, *Phytophthora*, *Sclerotinia*, *Sclerotium*, *Rhizoctonia*, *Verticillium*, *Plasmodiophora*, *Armillaria* and *Fusarium* spp, **nematodes**, soil insects and weeds. Apply granules to the soil surface and incorporate and seal the soil surface immediately. Do not plant into soil until a positive germination test has been conducted.	-	R4
Fluazaindolizine (Salibro Reklemel) Corteva	N-UN	Contact	NR	A	ALL	Registered in root & tuber vegetables, including potato, for control of **Root-Knot Nematode** (*Meloidogyne* spp.) Apply either pre-plant incorporated or as an in-furrow application at planting. Maximum of 1 application per crop.	-	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Fluensulfone (Nimitz) Adama	-	Contact	NR	A	ALL	Registered in potatoes for control of **Root-Knot Nematode** (*Meloidogyne* spp.) Apply as a broadcast or banded spray and mechanically incorporate to a depth of 15-20 cm as soon as possible. Apply a single application at least 7 days prior to planting.	L Bee:L	R4
Fluopyram (Velum Prime) Bayer	N-3	Contact	NR	A	ALL	Registered in potatoes for control of **Root-Knot Nematode** (*Meloidogyne* spp.) Apply as an in-furrow spray at planting.	L Bee:L	R4
Metham Sodium	-	Fumigant	NR	A	ALL	Registered in food crops as a pre-plant fumigant for control of **Plant Parasitic Nematodes**, weed seeds, and various fungal diseases. Applied as a soil injection, soil surface spray in front of a rotary tiller or through approved trickle irrigation systems.	-	R4
Cadusafos (Rugby)	1B	Contact		P		Registered for control of Nematodes in banana, citrus, ginger, sugar cane, tobacco and tomato.	H Bee:H	R4
Cyclobutrifluram (Vaniva Tymirium) Syngenta	N-3	Contact		P		Registered for control of Root-Knot Nematode in fruiting vegetables and cucurbits.	L Bee:L	R4
Fenamiphos (Nemacur)	1B	Contact		P		Registered for control of Nematodes in aloe vera and bananas.	H Bee:H	R3
Oxamyl (Vydate) Corteva	1A	Contact		P		Registered for control of Nematodes in bananas, capsicum, tomatoes and sweet potatoes.	H Bee:H	R4
Terbufos (Counter)	1B	Contact		P		Registered for control of Burrowing Nematode and Spiral Nematode in bananas.	H Bee:H	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Garden Weevil (*Phlyctinus callosus*) **Priority: Low**								
Garden Weevil is rated as a low priority. It is a localised problem in the Manjimup region of WA. They are a soil-borne pest that cause direct feeding damage to tubers, making them unsaleable. Control options are limited.								
Alpha-Cypermethrin PER12612	3A	Contact	14 G:35	A	WA & TAS	Permitted in potatoes for control of **Garden Weevil** (*Phlyctinus callosus*). Apply as a foliar spray when adult weevils are present. Retreatment interval not specified. Maximum of 3 applications per crop.	VH Bee:H	R3
Fipronil (Regent)	2B	Contact	NR NG	P-A	ALL	Registered in potatoes for control of Wireworm, Mole Cricket and Whitefringed Weevil (*Naupactus leucoloma*).	M Bee:VH	R2
Indoxacarb (Avatar eVo) FMC	22A	Ingestion		P		Registered for control of **Weevils** in pome fruit and stone fruit.	L Bee:H	R3
Tetraniliprole (Vayego) Bayer	28	Ingestion		P		Registered for control of Sigastus Weevil in macadamia and control of Apple Weevil, Fuller's Rose Weevil and Garden Weevil in pome fruit and stone fruit.	M Bee:VH	R4
Black Field Cricket (*Teleogryllus commodus*) **Australian Mole Cricket** (*Gryllotalpa australis*) **Priority: Low**								
Black Field Cricket and Australian Mole Cricket are rated as a low priority. They are a soil-borne pest that cause direct feeding damage to tubers, making them unsaleable. Control options are limited.								
Fipronil (Regent)	2B	Contact	NR NG	A	ALL	Registered in potatoes for control of Wireworm, **Mole Cricket** and White Fringed Weevil (*Naupactus leucoloma*). Apply as a broadcast spray to the soil surface and incorporate to 15cm depth prior to planting.	M Bee:VH	R2
Broflanilide (Cimegra) BASF	30	Contact & Ingestion		P		Registered in brassica vegetables and Chinese cabbage for control of Diamondback Moth. Broadspectrum activity on soil-dwelling pests although specific effect on crickets is currently unknown.	H Bee:VH	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Cotton Bollworm / Corn Earworm (*Helicoverpa armigera*) **Native Budworm** (*Helicoverpa punctigera*) **Priority: Low**								
Helicoverpa is rated as a low priority. *Helicoverpa armigera* is generally regarded as the more serious pest because of its greater capacity to develop resistance to insecticides, broader host range, and persistence in cropping areas from year to year. Larvae feed on leaves but are most damaging when feeding on growing terminals, buds and flowers. They do not impact the tubers as they are an above-ground pest.								
Bacillus thuringiensis subsp. kurstaki (DiPel)	11A	Biological	NR	A	ALL	Registered in vegetables for control of Lepidoptera. Time spraying to coincide with egg hatch. Treatments per season not limited.	VL Bee:VL	R4
Chlorantraniliprole (Coragen) FMC	28	Ingestion	NR G:7	A	ALL	Registered in potatoes for control of **Cotton Bollworm** (*Helicoverpa armigera*), **Native Budworm** (*Helicoverpa punctigera*) and Potato Moth (*Phthorimaea operculella*). Apply as a foliar spray when larvae numbers reach economic threshold. Use a retreatment interval of 10-14 days. Maximum of 3 applications per crop, with no more than 2 consecutive applications.	L Bee:VL	R4
Cyantraniliprole (Benevia) FMC	28	Ingestion	7 NG	A	ALL	Registered in potatoes for control of Silverleaf Whitefly (*Bemisia tabaci*), **Cotton Bollworm** (*Helicoverpa armigera*), **Native Budworm** (*Helicoverpa punctigera*) and Potato Tuber Moth (*Phthorimaea operculella*), and suppression of Green Peach Aphid (*Myzus persicae*) and Plague Thrips (*Thrips imaginis*). Apply as a foliar spray when larvae numbers reach economic threshold. Use a retreatment interval of 7-10 days. Maximum of 3 applications per crop, with no more than 2 consecutive applications.	M Bee:VH	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Flubendiamide (Belt) Bayer	28	Ingestion	1	A	ALL	Registered in root and tuber vegetables including beetroot for control of Diamondback Moth (*Plutella xylostella*), Cabbage White Butterfly (*Pieris rapae*), Cluster Caterpillar (*Spodoptera litura*), Potato Moth (*Phthorimaea operculella*) and **Heliothis** (*Helicoverpa* spp.) Apply as a foliar spray when larvae numbers reach economic threshold. Use a retreatment interval of 7-14 days. Maximum of 3 applications per crop.	L-M Bee:L	R4
Garlic + Chilli + Pyrethrins + Piperonyl Butoxide	3A	Contact	1	A	ALL	Registered in vegetables for control of Ants, Aphids, Caterpillars, Earwigs, Whitefly, Thrips and Leafhoppers. Suitable for organic growers. Apply as a foliar spray when pest is evident. Use a retreatment interval of 14-21 days. Maximum number of applications per crop not specified.	VH Bee:H	R4
Methomyl PER82428	1A	Contact	7	A	ALL	Permitted in root & tuber vegetables for control of ***Helicoverpa* spp.**, Cucumber Moth, Cluster Caterpillar, Loopers, Webworm, Rutherglen Bug and Thrips including Western Flower Thrips. Apply as a foliar spray when pest first appears. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop.	H Bee:H	R2
Nuclear Polyhedrosis Virus of *Helicoverpa armigera* (Vivus Max) AgBiTech	31	Biological	NR	A	ALL	Registered in potatoes for control of **Cotton Bollworm** (*Helicoverpa armigera*) and **Native Budworm** (*Helicoverpa punctigera*). Apply as a foliar spray when larvae are newly hatched. Retreatment may be required at 2-3 day intervals. Treatments per season not limited.	VL Bee:L	R4
Spinetoram (Success Neo) Corteva	5	Ingestion	3	A	ALL	Registered in root & tuber vegetables, including potatoes, for control of ***Helicoverpa* spp.**, Light Brown Apple Moth, Loopers, Potato Moth and Tomato Potato Psyllid. Apply as a foliar spray when larvae numbers reach economic threshold. Use a retreatment interval of 7-14 days. Maximum of 4 applications per crop.	M Bee:H	R4

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 G:14	A	ALL	Registered in root & tuber vegetables, including potatoes, for control of Light Brown Apple Moth, Loopers, ***Helicoverpa* spp.** and Potato Moth. Apply as a foliar spray when larvae numbers reach economic threshold. Use a retreatment interval of 7-14 days. Maximum of 4 applications per crop.	L Bee:L	R4
Thiodicarb (Larvin)	1A	Contact	7 G:21	A	ALL	Registered in potatoes for control of **Budworms** (*Helicoverpa* spp.) Apply as a foliar spray timed to newly hatched larvae. Retreatment interval not specified. Maximum of 2 applications per crop.	H Bee:M	R3
Clitoria ternatea Extract (Sero-X) Growth Agriculture	-	Biological	NR	P		Registered for control of ***Helicoverpa* spp.** in cotton, lucerne and tomato.	L Bee:VL	R4
Emamectin (Proclaim Opti) Syngenta	6	Ingestion		P		Registered for control of **Heliothis** in brassica vegetables, root & tuber vegetables (except potatoes), leafy vegetables, brassica leafy vegetables, sweet corn, strawberries, lettuce, cucurbits, legume vegetables and fruiting vegetables.	M Bee:H	R3
Indoxacarb (Avatar eVo) FMC	22A	Ingestion		P		Registered for control of ***Helicoverpa* spp.** in brassica vegetables, leafy vegetables, Chinese leafy vegetables, fruiting vegetables, celery, cucurbits, sweet corn and pome fruit.	L Bee:H	R3
Isocycloseram (Simodis Plinazolin) Syngenta	30	Ingestion		P		Registered for control of various Lepidoptera in brassica vegetables, brassica leafy vegetables, cucurbits and fruiting vegetables.	H Bee:H	R4
Methoxyfenozide (Prodigy) Corteva	18	Insect Growth Regulator		P		Registered for control of various Lepidopteran pests in various crops, including **Native Budworm** in fruiting vegetables.	VL Bee:VL	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Tomato Red Spider Mite (*Tetranychus evansi*) **Priority: Low**								
Tomato Red Spider Mite is rated as a low priority. They are small in size and difficult to identify with the naked eye. They inhabit the underside of leaves, preferring near the leaf veins. An integrated pest management approach should be used, particularly the preservation of beneficial species that will effectively keep mite populations in check.								
Abamectin PER14722	6	Ingestion	14 NG	A	ALL (excl. VIC)	Permitted in potato for control of **Tomato Red Spider Mite** (*Tetranychus evansi*). Apply as a foliar spray when mites first appear. Use a minimum retreatment interval of 28 days. Maximum of 2 applications per crop.	M Bee:H	R3
Sulphur	UN	Contact	NR	A	ALL	Registered in vegetables for control of **Mites.** Apply as a foliar spray when pest is first seen. Use a retreatment interval of 14-21 days. Maximum number of applications per crop not specified.	-	R4
Beauveria bassiana (Velifer) BASF	UNF	Biological	NR	P-A	ALL	Registered in protected vegetables and ornamentals for suppression of various pests including Western Flower Thrips, Onion Thrips, Greenhouse Whitefly, Silverleaf Whitefly, Sweet Potato Whitefly, Green Peach Aphid and Two-Spotted Spider Mites.	L Bee:L	R4
Propargite (Omite)	12C	Contact	7	P-A	ALL	Registered in vegetables for control of Two-Spotted Mites and Spider Mites.	M Bee:L	R3
Acequinocyl (Kanemite) UPL	20B	Contact & Ingestion		P		Registered for control of Two-Spotted Mite in pome fruit and stone fruit.	L Bee:L	R4
Bifenazate (Acramite) UPL	20D	Contact & Ingestion		P		Registered for control of various mites in almonds, pome fruit, stone fruit, cucurbits, eggplant, pawpaw, pepper, strawberries and tomatoes.	L Bee:H	R4
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	R4
Etoxazole (Paramite) Sumitomo	10B	Contact		P		Registered for control of Two-Spotted Mites in pome fruit, stone fruit, almonds and grapes.	L Bee:VL	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Isocycloseram (Simodis Plinazolin) Syngenta	30	Ingestion		P		Registered for control of Two Spotted Mite in cucurbits and fruiting vegetables.	H Bee:H	R4
Orange Oil (Prev-Am) Oro Agri	-	Contact		P		Registered for control of Two Spotted Mite in fruiting vegetables, cucurbits, legume vegetables, berries, apples, citrus and pawpaw.	VL Bee:VL	R4
Petroleum Oil	UN	Contact		P		Registered for control of Mites in apples, pears and citrus.	VL Bee:L	R4
Spiromesifen (Interrupt) Bayer	23	Ingestion		P		Registered for control of Two Spotted Mite in pome fruit and stone fruit.	M Bee:VL	R4
Silverleaf Whitefly (*Bemisia tabaci*) **Priority: Low**								
Silverleaf Whitefly is rated as a low priority. They rarely require control measures in potatoes, particularly if integrated pest management is in place to preserve beneficial species. They can cause damage by adults and larvae feeding on the leaves causing them to yellow and curl, as well as the production of honeydew which promotes sooty moulds and reduces photosynthesis.								
Afidopyropen (Versys) BASF	9D	Ingestion	7	A	ALL	Registered in potato for control of Green Peach Aphid (*Myzus persicae*), Cabbage Aphid (*Brevicoryne brassicae*), Currant Lettuce Aphid (*Nasonovia ribis-nigri*) and Cotton Aphid / Melon Aphid (*Aphis gossypii*) and suppression of **Silverleaf Whitefly** (*Bemisia tabaci*). Apply as a foliar spray, commencing when economic thresholds are reached. Retreatment interval not specified. Maximum of 2 applications for whitefly control per crop, and do not make consecutive applications. Maximum of 4 applications per crop for all pests.	L Bee:L	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Beauveria bassiana (Velifer) BASF	UNF	Biological	NR	A	ALL	Registered in protected vegetables and ornamentals for suppression of Western Flower Thrips, Onion Thrips, Greenhouse Whitefly, **Silverleaf Whitefly**, Sweet Potato Whitefly, Green Peach Aphid and Two-Spotted Spider Mites. Apply as a foliar spray when pests are first detected or above economic threshold. Use a retreatment interval of 3-14 days. Maximum number of applications per crop not specified.	L Bee:L	R4
Cyantraniliprole (Benevia) FMC	28	Ingestion	7 NG	A	ALL	Registered in potatoes for control of **Silverleaf Whitefly** (*Bemisia tabaci*), Cotton Bollworm (*Helicoverpa armigera*), Native Budworm (*Helicoverpa punctigera*) and Potato Tuber Moth (*Phthorimaea operculella*), and suppression of Green Peach Aphid (*Myzus persicae*) and Plague Thrips (*Thrips imaginis*). Apply as a foliar spray when numbers reach economic threshold. Use a retreatment interval of 7-10 days. Maximum of 3 applications per crop, with no more than 2 consecutive applications.	M Bee:VH	R4
Flupyradifurone (Sivanto Prime) Bayer	4D	Contact & Ingestion	7	A	ALL	Registered in potatoes for control of Green Peach Aphid (*Myzus persicae*) and **Silverleaf Whitefly** (*Bemisia tabaci*). Apply as a foliar spray when economic threshold is reached. Use a minimum retreatment interval of 7 days. Maximum of 2 applications per crop.	L Bee:VL	R4
Garlic + Chilli + Pyrethrins + Piperonyl Butoxide	3A	Contact	1	A	ALL	Registered in vegetables for control of Ants, Aphids, Caterpillars, Earwigs, **Whitefly**, Thrips and Leafhoppers. Suitable for organic growers. Apply as a foliar spray when pest is evident. Use a retreatment interval of 14-21 days. Maximum number of applications per crop not specified.	VH Bee:H	R4
Potassium Salts of Fatty Acids (Natrasoap)	-	Contact	NR	A	ALL	Registered in vegetables for control of Aphids, Thrips, Mealybug, Two Spotted Mites, Spider Mite and **Whitefly**. Apply as a foliar spray as need. Use a retreatment interval of 5-7 days. Maximum number of applications per crop not specified.	L Bee:L	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Spirotetramat (Movento) Bayer	23	Ingestion	7	A	ALL	Registered in potatoes for control of Green Peach Aphid (*Myzus persicae*) and **Silverleaf Whitefly** (*Bemisia tabaci*). Apply as a foliar spray when monitoring indicates pest threshold has been reached. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop.	M Bee:VL	R4
Flonicamid (Mainman) UPL	29	Ingestion	14 NG	P-A	ALL	Registered in potatoes for control of Green Peach Aphid (*Myzus persicae*), Melon Aphid (*Aphis gossypii*) and Potato Aphid (*Macrosiphum euphorbiae*). Registered for control of **Silverleaf Whitefly** (*Bemisia tabaci*) in cucurbits, strawberries and tomato.	M Bee:L	R4
Pymetrozine (Chess) Syngenta	9B	Contact & Ingestion	NR	P-A	ALL	Registered in potatoes for control of Green Peach Aphid (*Myzus persicae*). Registered for suppression of **Silverleaf Whitefly** (*Bemisia tabaci*) in brassica vegetables, tomatoes, egplants, capsicums, lettuce, cucurbits, cut flowers and nursery stocks.	L Bee:VL	R3
Buprofezin (Applaud)	16	IGR / Ingestion		P		Registered for control of **Silverleaf Whitefly** (*Bemisia tabaci*) in tomatoes, herbs and cotton.	L Bee:VL	R4
Clitoria ternatea extract (Sero-X) Growth Agriculture	-	Biological	NR	P		Registered for control of **Silverleaf Whitefly** (*Bemisia tabaci*) in cotton, cucurbits and tomato.	L Bee:L	R4
Dimpropyridaz (Efficon) BASF	36	Ingestion		P		Registered for control of **Silverleaf Whitefly** (*Bemisia tabaci*) in cotton, cucurbits and fruiting vegetables.	M Bee:L	R4
Orange Oil (Prev-Am) Oro Agri	-	Contact	NR	P	ALL	Registered for control of **Silverleaf Whitefly** (*Bemisia tabaci*) in fruiting vegetables, cucurbits, legume vegetables, berries,, brassica and citrus.	L Bee:L	R4
Petroleum Oil	-	Contact	1	P	QLD	Registered for control of **Whitefly** in corn, sugar beet, cut flowers and shade trees.	L Bee:L	R4
Pyriproxyfen (Admiral)	7C	IGR / Ingestion		P		Registered for control of **Silverleaf Whitefly** (*Bemisia tabaci*) in cotton, rockmelon, tomato and capsicum.	VL Bee:L	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Potato Wireworm (*Hapatesus hirtus*) **Priority: Low**								
Potato Wireworm is rated as a low priority. They are a soil-borne pest and the larvae cause direct feeding damage to roots and tubers. Bait sampling prior to planting should be used to determine their presence and determine the need for insecticide treatments.								
1,3-Dichloropropene + Chloropicrin + (Telone C-35)	8B	Soil Fumigant	NR	A	ALL	Registered in vegetables 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.***	-	R4
Dazomet (Basamid)	8F	Soil Fumigant	NR	A	ALL	Pre-plant fumigant in seed beds for control of soil fungi including *Pythium*, *Phytophthora*, *Sclerotinia*, *Sclerotium*, *Rhizoctonia*, *Verticillium*, *Plasmodiophora*, *Armillaria* and *Fusarium* spp, nematodes, soil insects and weeds. Apply granules to the soil surface and incorporate and seal the soil surface immediately. Do not plant into soil until a positive germination test has been conducted.	-	R4
Fipronil (Regent)	2B	Contact	NR NG	A	ALL	Registered in potatoes for control of **Wireworm**, Mole Cricket and Whitefringed Weevil (*Naupactus leucoloma*). Apply as a broadcast spray to the soil surface and incorporate to 15cm depth prior to planting.	M Bee:VH	R2
Phorate (Thimet)	1B	Contact	91	A	ALL	Registered in potatoes for control of Aphids, Thrips, Jassids, Two-Spotted Mite and **Wireworm**. Distribute the granules evenl;y in the furrow or band granules on each side of the row at planting time.	H Bee:H	R2
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. Cimegra® (Broflanilide 100 g/L) is registered in Canada in corn and potatoes for the control of **Wireworms** and Corn Rootworm applied as an in-furrow treatment at planting.	H Bee:VH	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Lyriomyza Leafminer (*Liriomyza* spp.) **Priority: Low**								
Lyriomyza Leafminer is rated as a low priority. They are a recent pest in Australia with a wide host range. The larvae tunnel under the leaf surface causing visible damage and reducing crop health. Potatoes are a known host but experience to date indicates that they are not causing major production issues.								
Abamectin PER96481	6	Ingestion	14 NG	A	ALL (excl. VIC)	Permitted in root & tuber vegetables for suppression of Leafminers (*Liriomyza* spp.) including **Vegetable Leafminer** (*Liriomyza sativae*) and **Serpentine Leafminer** (*Liriomyza huidobrensis*). Apply as a foliar spray when pest first appears. Use a retreatment interval of 7-14 days. Maximum of 2 applications per crop.	M Bee:H	R3
Cyantraniliprole (Benevia) FMC PER93849	28	Ingestion	7 NG	A	ALL (excl. VIC)	Permitted in potatoes for control of **Leafminers** (*Liriomyza* spp.) including **Vegetable Leafminer** (*Liriomyza sativae*) and **Pea Leafminer** / **Serpentine Leafminer** (*Liriomyza huidobrensis*). Apply as a foliar spray when pests first appear. Use a minimum retreatment interval of 7 Days. Maximum of 3 applications per crop.	M Bee:VH	R4
Cyromazine (Diptex 150 WP) PER81867	17	IGR	7 NG	A	ALL	Permitted in root & tuber vegetables for control of *Liriomyza* species, including **Vegetable Leafminer** (*Liriomyza sativa*) and **Serpentine Leafminer** (*Liriomyza huidobrensis*). Apply as a foliar spray, commencing when leafminers first appear. Use a minimum retreatment interval of 7 days. Maximum of 6 applications per crop.	-	R4
Spinetoram (Success Neo) Corteva PER94451	5	Ingestion	3	A	ALL (excl. VIC)	Permitted in root and tuber vegetables for control of Liriomyza Leafminers, including **Vegetable Leafminer** (*Liriomyza sativa*), **Pea Leafminer** / **Serpentine Leafminer** (*Liriomyza huidobrensis*) & **American Serpentine Leafminer** (*Liriomyza trifolii*). Apply as a foliar spray, commencing when leafminers first appear. Use a retreatment interval of 7-14 days. Maximum of 4 applications per crop.	M Bee:H	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Spinosad (Entrust Organic) Corteva PER96806	5	Ingestion	3 G:14	A	ALL (excl. VIC)	Permitted in root & tuber vegetables, including potatoes, for control of Liriomyza Leafminers, including **Vegetable Leafminer** (*Liriomyza sativa*), **Pea Leafminer** / **Serpentine Leafminer** (*Liriomyza huidobrensis*) & **American Serpentine Leafminer** (*Liriomyza trifolii*). Apply as a foliar spray, commencing when leafminers first appear. Use a minimum retreatment interval of 5 days. Maximum of 3 applications per crop.	L Bee:L	R4
Chlorantraniliprole (Coragen) FMC PER89353	28	Ingestion	3 NG	P-A	ALL (excl. VIC)	Permitted in root and tuber vegetables for control of Fall Armyworm. Registered for control of a broad range of Lepidopteran pests in various vegetables crops. Permitted for control of **Leafminers** (*Liriomyza* spp.) in spinach and silverbeet.	L Bee:VL	R4
Flupyradifurone (Sivanto Prime) Bayer	4D	Contact & Ingestion	7	P-A	ALL	Registered in potatoes for control of Green Peach Aphid (*Myzus persicae*) and Silverleaf Whitefly (*Bemisia tabaci*).	L Bee:VL	R4
Emamectin (Proclaim Opti) Syngenta	6	Ingestion		P		Permitted for control of ***Liriomyza*** species, including **Vegetable Leafminer** (*Liriomyza sativae*) in brassica vegetables.	M Bee:H	R3
Isocycloseram (Simodis Plinazolin) Syngenta	30	Ingestion		P		Permitted for control of **Serpentine Leafminer** (*Liriomyza huidobrensis*) in celery, baby leaf spinach, baby leaf lettuce, kale, open leaf lettuce, parsley, coriander, shallots, leek, tomato and capsicum.	H Bee:H	R4
Slugs & Snails (Gastropoda) **Priority: Low**								
Slugs & snails are rated as a low priority. Slugs and snails will feed on tubers, reducing crop yield and quality. An integrated pest management approach should be used to control populations in the long term.								
Iron EDTA	-	Contact	NR	A	ALL	Registered in vegetables for control of **Snails & Slugs**. Apply evenly to the field. Ensure pellets do not become lodged in plant foliage. Treatments per season not limited.	-	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Metaldehyde	-	Contact	7 NG	A	ALL	Registered in vegetables for control of **Snails & Slugs**. Broadcast evenly over the ground where snails and slugs are active or incorporate with seed when direct drilling. Treatments per season not limited.	-	R4
Metaldehyde + Fipronil (Transcend) Imtrade	2B	Contact	NR NG	A	ALL	Registered in potato for control of European Earwigs, Portugese Millipedes, Slaters and **Snails & Slugs**. Broadcast evenly over the soil surface prior to crop emergence.	-	R2

4.3 Weeds in Potato

4.3.1 Weed priorities

Common Name	Scientific Name
High	
Flaxleaf Fleabane	*Conyza bonariensis*
Nutgrass	*Cyperus rotundus*
Annual Ryegrass	*Lolium rigidum*
Couch Grass	*Cynodon dactylon*
Volunteer Potatoes	*Solanum tuberosum*
Moderate	
Onion Grass	*Romulea rosea*
Common Fumitory	*Fumaria officinalis*
Wireweed	*Polygonum erectum*
Red-Root Amaranth	*Amaranthus* spp.
Blackberry Nightshade	*Solanum nigrum*
Fat Hen	*Chenopodium album*
Marshmallow	*Malva parviflora*
Pigweed	*Portulaca oleracea*
Sowthistle	*Sonchus oleraceus*
Spear Thistle	*Cirsium vulgare*
Stemless Thistle	*Onopordum acaulon*
Tumbleweed / Russian Thistle	*Salsola australis*
Turnip Weed	*Rapistrum rugosum*
Wild Radish	*Raphanus raphanistrum*

The high priority weed issues based on industry consultation were Flaxleaf Fleabane, Nutgrass, Annual Ryegrass, Couch Grass and Volunteer Potatoes. Herbicide options are listed in Appendix 3 which can be used in conjunction with various management practices such as soil fumigation, pre-crop spraying, spot spraying and mechanical controls.

Growers generally use a pre-plant weed control (general knockdown herbicides) to prepare the paddock. Growers then either alternate the herbicides used or use them in combination for effective weed control.

Resistance management

Specific resistance management strategies for high resistance risk (1 and 2) and moderate resistance risk (0, 3, 4, 5, 6, 9, 10, 12, 13, 14, 15, 22, 27, 31 and 34) herbicide modes of action are available on the CropLife Australia webpage[8].

[8] 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 6)**	
***	High resistance risk	R1	Short-term risk: Critical concern over retaining access < 1 year
		R2	Medium-term risk: Maintaining access of significant concern <2-5 years
**	Moderate resistance risk	R3	Long-term: Potential issues associated with use - Monitoring required < 5 years
		R4	No current risk / concerns
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**							
Flaxleaf Fleabane is rated as a high priority, although it is not present in Tasmania. Flaxleaf Fleabane seeds prolifically and can germinate year-round. It is difficult to control with herbicides, and a continuous program is required to manage it in cropping fields.							
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Dichlobenil (Casoran)	29**		Registered for residual weed control of annual grass and broadleaf weeds in orchards.		P		R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Flumioxazin (Chateau)	14**		Registered for residual control of grass and broadleaf weeds, including **Fleabane**, in grapevines, pome fruit, stone fruit, citrus, tree nuts, olives, avocados and blueberries.		P		R4
Saflufenacil (Sharpen) BASF	14**		Registered for control of **Flaxleaf Fleabane** in citrus, pome fruit & almonds.		P		R4
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		R4
Nutgrass (*Cyperus rotundus*) **Priority: High**							
Nutgrass is rated as a high priority. It prefers damp, water-logged soils but can survive for years underground during dry times. Herbicide options are limited and unreliable. Improve soil drainage if possible.							
Ethyl Dipropylthiocarbamate (Eptam)	15**	Potatoes	Registered in potatoes for control of grass, broadleaf weeds and **Nutgrass**. Apply as a broadcast or banded pre-emergence spray. Must be mechanically incorporated to 5-10cm depth immediately after application.	NR	A	NSW, ACT & QLD	R4
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass, broadleaf weeds and **Nutgrass** as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Norflurazon (Zoliar) AgNova	12**		Registered for control of **Nutgrass** in asparagus, citrus, grapes, nuts, stone & pome fruits.		P		R4
Annual Ryegrass (*Lolium rigidum*) **Priority: High**							
Annual Ryegrass is rated as a high priority. 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**	Potatoes / Post-Emergent	Registered in potatoes for control of annual and perennial grasses. Apply as an inter-roe spray.	7	A	ALL	R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Amitrole	34**	Potatoes / Pre-Harvest Preparation	Registered in potatoes for control of **Ryegrass**, Winter Grass, Capeweed and Paterson's Curse. Apply 4-5 weeks before harvest after potato haulms have dried off.	NR	A	VIC & TAS	R3
Atrazine	5**	Potatoes / Pre-Harvest Preparation	Registered in potatoes for control of Capeweed, Clovers, Cruciferous Weeds, Paterson's Curse, **Ryegrass**, Variegated Thistle and Winter Grass. Apply after potato haulms have dried off and weeds are at seedling stage.	NR G:28	A	VIC & TAS	R3
Clethodim (Select)	1***	Potatoes / Post-Emergent	Registered in potatoes for control of grass weeds, including **Annual Ryegrass**. Apply post-emergence to young, actively growing weeds.	28	A	ALL	R4
Ethyl Dipropylthiocarbamate (Eptam)	15**	Potatoes	Registered in potatoes for control of grass and broadleaf weeds, including **Annual Ryegrass**. Apply as a broadcast or banded pre-emergence spray. Must be mechanically incorporated to 5-10cm depth immediately after application.	NR	A	NSW, ACT & QLD	R4
Fluazifop-P-Butyl (Fusilade)	1***	Potatoes / 15 cm or less in height	Registered in potatoes for control of grass weeds, including **Annual Ryegrass**. Apply post-emergence as a broadcast or banded spray.	70	A	ALL	R3
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Metobromuron (Soleto) GroChem	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Annual Ryegrass**. Apply 1 broadcast or banded spray after ridging and prior to crop emergence.	NR	A	ALL	R4
Metribuzin	5**	Potatoes	Registered in potatoes for control of grass & broadleaf weeds, including **Annual Ryegrass**. Apply as a broadcast or banded spray at early crop emergence stage.	NR	A	ALL	R4
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Prometryn	5**	Potatoes / Pre-Emergence	Registered in potatoes for control broadleaf weeds and suppression of certain grass weeds, including the suppression of **Annual Ryegrass**. Apply as a pre-emergent spray to bare soil.	NR	A	ALL (excl. SA)	R4
Quizalofop-P-Ethyl	1***	Potatoes / Post Emergent	Registered in potatoes for the control of grass weeds, including **Annual Ryegrass**. Apply post-emergence when weeds are young and actively growing.	70	A	ALL	R4
Sethoxydim (Sertin)	1***	Potatoes / Post Emergent	Registered in potatoes for control of grass weeds, including **Annual Ryegrass**. Apply post-emergence when weeds are young and actively growing.	NR	A	ALL	R4
S-Metolachlor + Prosulfocarb (Boxer Gold)	15**	Potatoes	Registered in potatoes for control of grass and broadleaf weeds, including **Annual Ryegrass**. Apply as a broadcast or banded spray to moist soil after planting, after the first cultivation but no later than 25% potato shoot emergence. Maximum of 1 application per crop.	NR	A	ALL	R4
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		R4
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		R4
Napropamide (Devrinol)	0**		Registered for control of **Annual Ryegrass** in almonds, grapevines, stone fruit, tomatoes and canola.		P		R4
Nonanoic Acid (Beloukha)	-		Registered for control of **Annual Ryegrass** in non-crop areas, turf, orchards & vineyards, fallow and forestry.		P		R4
Norflurazon (Zoliar) AgNova	12**		Registered for control of **Annual Ryegrass** in citrus, grapes, nuts, stone & pome fruits.		P		R4
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		R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Couch Grass (*Cynodon dactylon*) **Priority: High**							
Couch Grass is rated as a high priority. Couch Grass is an aggressive and highly competitive perennial grass that grows year-round in most areas. Herbicide control is effectively provided it is targeted to young, actively growing weeds. Multiple applications are usually required. There are limited in-crop herbicide options available.							
2,2-DPA (Dalapon)	0**	Potatoes / Post-Emergent	Registered in potatoes for control of annual and perennial grasses. Apply as an inter-roe spray.	7	A	ALL	R4
Ethyl Dipropylthiocarbamate (Eptam)	15**	Potatoes	Registered in potatoes for control of grass and broadleaf weeds, including **Couch Grass**. Apply as a broadcast or banded pre-emergence spray. Must be mechanically incorporated to 5-10cm depth immediately after application.	NR	A	NSW, ACT & QLD	R4
Fluazifop-P-Butyl (Fusilade)	1***	Potatoes / 15 cm or less in height	Registered in potatoes for control of grass weeds, including **Couch Grass**. Apply post-emergence as a broadcast or banded spray.	70	A	ALL	R3
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Quizalofop-P-Ethyl	1***	Potatoes / Post Emergent	Registered in potatoes for the control of grass weeds, including **Couch Grass**. Apply post-emergence when weeds are young and actively growing.	70	A	ALL	R4
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		R4
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		R4
Nonanoic Acid (Beloukha)	-		Registered for control of **Couch Grass** in non-crop areas, turf, orchards & vineyards, fallow and forestry.		P		R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Norflurazon (Zoliar) AgNova	12**		Registered for control of various grass and broadleaf weeds, including suppression of **Couch Grass** in citrus, grapes, almonds, pome fruit and stone fruit.		P		R4
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		R4
Volunteer Potatoes (*Solanum tuberosum*) **Priority: High**							
Volunteer Potatoes are rated as a high priority. An integrated weed management strategy is critical for management of volunteers. Cultural measures include minimising the number of tubers left in the field during harvest and ensuring that any tubers left behind are on the soil surface where they will be killed by frost during winter. Physical control involves several well-timed inter-row cultivations to reduce the population of volunteers. Grazing fields during the fallow period will also be effective at reducing the number of tubers. Herbicides are effective when combined with tillage strategies and provided that application timing is effective.							
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Bromoxynil (Maya) Nufarm	6**		Registered for control of **Volunteer Potato** in bulb onions.		P		R3
Fluroxypyr (Starane) PER87200	4**		Permitted for control of **Volunteer Potatoes** in bulb onions.		P		R4
Oxyfluorfen (Goal)	14**		Registered for control of **Volunteer Potato** in onions.		P		R4

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		R4
Onion Grass (*Romulea rosea*) **Priority: Moderate**							
Onion Grass is rated as a moderate priority. It is a perennial herb which produces abundant seed and has underground corms that can survive hot, dry summers. Herbicide options are limited and generally ineffective. An integrated weed management program including tillage and timely herbicide application is critical for management of Onion Grass.							
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Common Fumitory (*Fumaria officinalis*) **Priority: Moderate**							
Common Fumitory is rated as a moderate priority. Fumitory is an aggressive and competitive weed which develops a highly persistent seed bank. Requires ongoing management using an integrated weed management approach.							
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Metobromuron (Soleto) GroChem	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Fumitory**. Apply 1 broadcast or banded spray after ridging and prior to crop emergence.	NR	A	ALL	R4
Metribuzin	5**	Potatoes	Registered in potatoes for control of grass & broadleaf weeds, including **Fumitory**. Apply as a broadcast or banded spray at early crop emergence stage.	NR	A	ALL	R4
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Prometryn	5**	Potatoes / Pre-Emergence	Registered in potatoes for control broadleaf weeds and suppression of certain grass weeds, including **Fumitory**. Apply as a pre-emergent spray to bare soil.	NR	A	ALL (excl. SA)	R4
S-Metolachlor +Prosulfocarb (Boxer Gold)	15**	Potatoes	Registered in potatoes for control of grass and broadleaf weeds, including **Fumitory**. Apply as a broadcast or banded spray to moist soil after planting, after the first cultivation but no later than 25% potato shoot emergence. Maximum of 1 application per crop.	NR	A	ALL	R4
Bromoxynil (Maya) Nufarm	6**		Registered for control of **Fumitories** in bulb onions.		P		R3
Dimethenamid-P (Outlook)	15**		Registered for control of grass and broadleaf weeds, including **Fumitory** in sweet corn, beans, peas, pumpkins and kabocha.		P		R4
Ethofumesate (Tramat)	15**		Registered for control of grass and broadleaf weeds, including **Fumitory** in beet crops, oilseed poppy and onions.		P		R4
Fluroxypyr (Starane) PER87200	4**		Permitted for control of **Fumitories** in bulb onions.		P		R4
Methabenzthiazuron (Tribunil)	5**		Permitted for control of **Fumitories** in bulb onions.		P		R3
Oxyfluorfen (Goal)	14**		Registered for control of **Fumitories** in onions.		P		R4
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		R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Wireweed (*Polygonum erectum*) **Priority: Moderate**							
Wireweed is rated as a moderate priority. Wireweed needs a period of low soil temperature to germinate, but its long taproot allows it to persist through hot, dry weather. It grows rapidly in the warmer months and is difficult to control with herbicides. Application timing is critical to ensure small weeds are targeted.							
Dicamba	4**	Potatoes / After Haulm Senescence	Registered in potatoes for control of Blackberry Nightshade, Chickweed, Climbing Buckwheat / Black Bindweed, Clover, Docks, Fat Hen, Thistles and **Wireweed** / **Hogweed**. Apply as a broadcast or banded spray after haulm senescence.	NR G:7	A	TAS	R3
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Linuron	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Wireweed**. Apply as a broadcast or banded spray after planting but before crop emergence. Incorporate by irrigation or rainfall as soon as possible after application.	NR	A	ALL	R4
Metobromuron (Soleto) GroChem	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Wireweed**. Apply 1 broadcast or banded spray after ridging and prior to crop emergence.	NR	A	ALL	R4
Metribuzin	5**	Potatoes	Registered in potatoes for control of grass & broadleaf weeds, including **Wireweed**. Apply as a broadcast or banded spray at early crop emergence stage.	NR	A	ALL	R4
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Bromoxynil (Maya) Nufarm	6**		Registered for control of **Wireweed** in bulb onions.		P		R3
Ethofumesate (Tramat)	15**		Registered for control of grass and broadleaf weeds, including **Wireweed** in beet crops, oilseed poppy and onions.		P		R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Fluroxypyr (Starane) Corteva	4**		Registered for control of **Wireweed** in non-crop areas and pastures.		P		R4
Norflurazon (Zoliar) AgNova	12**		Registered for control of **Wireweed** in citrus, grapes, almonds, pome fruit and stone fruit.		P		R4
Oxyfluorfen (Goal)	14**		Registered for control of grass and broadleaf weeds, including **Wireweed** in fallow, Brassica vegetables and fruit and nut trees. Compatible with glyphosate and diquat/paraquat.		P		R4
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		R4
Red-Root Amaranth (*Amaranthus* spp.) **Priority: Moderate**							
Red-Root Amaranth is rated as a moderate priority. It is a short-lived annual weed that can pose a problem every year as they are prolific seed producers. Herbicide control can be effective but application timing is critical to ensure small weeds are targeted.							
Clomazone	13**	Potatoes	Registered in potatoes for control of Apple of Peru, Blackberry Nightshade, Fat Hen, Pig Weed, Potato Weed and suppression of **Amaranth**. Apply post-plant pre-emergence as a broadcast or banded spray.	NR	A	TAS	R4
Ethyl Dipropylthiocarbamate (Eptam)	15**	Potatoes	Registered in potatoes for control of grass and broadleaf weeds, including **Amaranth**. Apply as a broadcast or banded pre-emergence spray. Must be mechanically incorporated to 5-10cm depth immediately after application.	NR	A	NSW, ACT & QLD	R4
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Linuron	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Redshank**. Apply as a broadcast or banded spray after planting but before crop emergence. Incorporate by irrigation or rainfall as soon as possible after application.	NR	A	ALL	R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Metobromuron (Soleto) GroChem	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Amaranth**. Apply 1 broadcast or banded spray after ridging and prior to crop emergence.	NR	A	ALL	R4
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Prometryn	5**	Potatoes / Pre-Emergence	Registered in potatoes for control broadleaf weeds and suppression of certain grass weeds, including **Amaranth**. Apply as a pre-emergent spray to bare soil.	NR	A	ALL (excl. SA)	R4
S-Metolachlor + Prosulfocarb (Boxer Gold)	15**	Potatoes	Registered in potatoes for control of grass and broadleaf weeds, including **Redroot Amaranth**. Apply as a broadcast or banded spray to moist soil after planting, after the first cultivation but no later than 25% potato shoot emergence. Maximum of 1 application per crop.	NR	A	ALL	R4
Bromoxynil (Maya) Nufarm	6**		Registered for control of broadleaf weeds, including **Amaranthus**, in bulb onions.		P		R3
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		R4
Ethofumesate (Tramat)	15**		Registered for control of grass and broadleaf weeds, including **Amaranth** in beet crops, oilseed poppy and onions.		P		R4
Fluroxypyr (Starane)	4**		Registered for control of broadleaf weeds, including **Amaranth** in sorghum, maize, sweet corn and millet.		P		R4
Glufosinate-Ammonium (Basta) BASF	10**		Registered for control of grass and broadleaf weeds including **Amaranthus** in berries, tomatoes, beans and fallow.		P		R3

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		R4
Blackberry Nightshade (*Solanum nigrum*) **Priority: Moderate**							
Blackberry Nightshade is rated as a moderate priority. Prolific perennial, broadleaf, weed that is widely adapted and difficult to eradicate, mainly due to its long-term seed viability. Herbicide control is effective but requires timely application and avoidance of seed set over several years to bring the soil seed bank down.							
Clomazone	13**	Potatoes	Registered in potatoes for control of Apple of Peru, **Blackberry Nightshade**, Fat Hen, Pig Weed, Potato Weed and suppression of Amaranth. Apply post-plant pre-emergence as a broadcast or banded spray.	NR	A	TAS	R4
Cyanazine	5**	Potatoes	Registered in potatoes for control of broadleaf weeds, including **Blackberry Nightshade**. Apply just before or as the crop is emerging.	NR	A	TAS	R3
Dicamba	4**	Potatoes / After Haulm Senescence	Registered in potatoes for control of **Blackberry Nightshade**, Chickweed, Climbing Buckwheat / Black Bindweed, Clover, Docks, Fat Hen, Thistles and Wireweed / Hogweed. Apply as a broadcast or banded spray after haulm senescence.	NR G:7	A	TAS	R3
Ethyl Dipropylthiocarbamate (Eptam)	15**	Potatoes	Registered in potatoes for control of grass and broadleaf weeds, including **Blackberry Nightshade**. Apply as a broadcast or banded pre-emergence spray. Must be mechanically incorporated to 5-10cm depth immediately after application.	NR	A	NSW, ACT & QLD	R4
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Linuron	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Blackberry Nightshade**. Apply as a broadcast or banded spray after planting but before crop emergence. Incorporate by irrigation or rainfall as soon as possible after application.	NR	A	ALL	R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Metobromuron (Soleto) GroChem	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Blackberry Nightshade**. Apply 1 broadcast or banded spray after ridging and prior to crop emergence.	NR	A	ALL	R4
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Prometryn	5**	Potatoes / Pre-Emergence	Registered in potatoes for control broadleaf weeds and suppression of certain grass weeds, including **Blackberry Nightshade**. Apply as a pre-emergent spray to bare soil.	NR	A	ALL (excl. SA)	R4
S-Metolachlor + Prosulfocarb (Boxer Gold)	15**	Potatoes	Registered in potatoes for control of grass and broadleaf weeds, including **Blackberry Nightshade**. Apply as a broadcast or banded spray to moist soil after planting, after the first cultivation but no later than 25% potato shoot emergence. Maximum of 1 application per crop.	NR	A	ALL	R4
Aclonifen (Emerger) Bayer	32**	Pre-Emergence	Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various vegetable crops. Registered in Europe for use in potatoes, legume vegetables and cereals. **Blackberry Nightshade** is listed as moderately susceptible at a high rate.		P		R4
Dimethenamid-P (Outlook) BASF	15**		Registered for control of grass and broadleaf weeds, including **Blackberry Nightshade** in sweet corn, beans, peas, pumpkins and kabocha.		P		R4
Fluroxypyr (Starane) Corteva	4**		Registered for control of **Blackberry Nightshade** in non-crop areas and pastures.		P		R4
Norflurazon (Zoliar) AgNova	12**		Registered for control of various grass and broadleaf weeds, including **Blackberry Nightshade** in citrus, grapes, almonds, pome fruit and stone fruit.		P		R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Oxyfluorfen (Goal)	14**		Registered for control of various grass and broadleaf weeds, including **Blackberry Nightshade**, in fruit and nut trees, vines, brassica vegetables, coffee, duboisia, pyrethrum, tobacco and tropical & subtropical fruit.		P		R4
S-Metolachlor (Dual Gold)	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		R4
Fat Hen (*Portulaca oleracea*) **Priority: Moderate**							
Fat Hen is rated as a moderate priority. It 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.							
Clomazone	13**	Potatoes	Registered in potatoes for control of Apple of Peru, Blackberry Nightshade, **Fat Hen**, Pig Weed, Potato Weed and suppression of Amaranth. Apply post-plant pre-emergence as a broadcast or banded spray.	NR	A	TAS	R4
Dicamba	4**	Potatoes / After Haulm Senescence	Registered in potatoes for control of Blackberry Nightshade, Chickweed, Climbing Buckwheat / Black Bindweed, Clover, Docks, **Fat Hen**, Thistles and Wireweed / Hogweed. Apply as a broadcast or banded spray after haulm senescence.	NR G:7	A	TAS	R3
Ethyl Dipropylthiocarbamate (Eptam)	15**	Potatoes	Registered in potatoes for control of grass and broadleaf weeds, including **Fat Hen**. Apply as a broadcast or banded pre-emergence spray. Must be mechanically incorporated to 5-10cm depth immediately after application.	NR	A	NSW, ACT & QLD	R4
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Linuron	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Fat Hen**. Apply as a broadcast or banded spray after planting but before crop emergence. Incorporate by irrigation or rainfall as soon as possible after application.	NR	A	ALL	R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Metobromuron (Soleto) GroChem	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Fat Hen**. Apply 1 broadcast or banded spray after ridging and prior to crop emergence.	NR	A	ALL	R4
Metribuzin	5**	Potatoes	Registered in potatoes for control of grass & broadleaf weeds, including **Fat Hen**. Apply as a broadcast or banded spray at early crop emergence stage.	NR	A	ALL	R4
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Prometryn	5**	Potatoes / Pre-Emergence	Registered in potatoes for control broadleaf weeds and suppression of certain grass weeds, including **Fat Hen**. Apply as a pre-emergent spray to bare soil.	NR	A	ALL (excl. SA)	R4
S-Metolachlor + Prosulfocarb (Boxer Gold)	15**	Potatoes	Registered in potatoes for control of grass and broadleaf weeds, including **Fat Hen**. Apply as a broadcast or banded spray to moist soil after planting, after the first cultivation but no later than 25% potato shoot emergence. Maximum of 1 application per crop.	NR	A	ALL	R4
Aclonifen (Emerger) Bayer	32**	Pre-Emergence	Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various vegetable crops. Registered in Europe for use in potatoes, legume vegetables and cereals. **Fat Hen** is listed as susceptible.		P		R4
Bromoxynil (Maya) Nufarm	6**		Registered for control of broadleaf weeds, including **Fat Hen**, in bulb onions.		P		R3
Ethofumesate (Tramat)	15**		Registered for control of grass and broadleaf weeds, including **Fat Hen** in beet crops, oilseed poppy and onions.		P		R4
Glufosinate-Ammonium (Basta) BASF	10**		Registered for control of grass and broadleaf weeds including **Fat Hen** in berries, tomatoes, beans and fallow.		P		R3

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Norflurazon (Zoliar) AgNova	12**		Registered for control of grass and broadleaf weeds including **Fat Hen** in asparagus, citrus, grapes, nuts, stone & pome fruits.		P		R4
Oxyfluorfen (Goal)	14**		Registered for control of grass and broadleaf weeds, including **Fat Hen** in fallow, Brassica vegetables and fruit and nut trees. Compatible with glyphosate and diquat/paraquat.		P		R4
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		R4
Marshmallow (*Malva parviflora*) **Priority: Moderate**							
Marshmallow is rated as a moderate priority. Adapted to a wide variety of environments and highly competitive weed. Control with knockdown herbicides can be unreliable.							
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Metobromuron (Soleto) GroChem	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Mallow**. Apply 1 broadcast or banded spray after ridging and prior to crop emergence.	NR	A	ALL	R4
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Flumioxazin (Chateau) Sumitomo	14**		Registered for control of **Marshmallow** in grapes, pome fruit, stone fruit, citrus, nut trees, olives, avocados and berries.		P		R4
Fluroxypyr (Starane) Corteva	4**		Registered for control of **Small Flowered Mallow** in fallows.		P		R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Oxyfluorfen (Goal)	14**		Registered for control of grass and broadleaf weeds, including **Small Flowered Mallow** in fallow, Brassica vegetables and fruit and nut trees. Compatible with glyphosate and diquat/paraquat.		P		R4
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		R4
Pigweed (*Portulaca oleracea*) **Priority: Moderate**							
Pigweed is rated as a moderate priority. Summer growing broadleaf weed that competes aggressively in-crop and can be difficult to control with herbicides.							
Clomazone	13**	Potatoes	Registered in potatoes for control of Apple of Peru, Blackberry Nightshade, Fat Hen, **Pig Weed**, Potato Weed and suppression of Amaranth. Apply post-plant pre-emergence as a broadcast or banded spray.	NR	A	TAS	R4
Ethyl Dipropylthiocarbamate (Eptam)	15**	Potatoes	Registered in potatoes for control of grass and broadleaf weeds, including **Pigweed**. Apply as a broadcast or banded pre-emergence spray. Must be mechanically incorporated to 5-10cm depth immediately after application.	NR	A	NSW, ACT & QLD	R4
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Linuron	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Pigweed**. Apply as a broadcast or banded spray after planting but before crop emergence. Incorporate by irrigation or rainfall as soon as possible after application.	NR	A	ALL	R4
Metobromuron (Soleto) GroChem	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Pigweed**. Apply 1 broadcast or banded spray after ridging and prior to crop emergence.	NR	A	ALL	R4
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	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**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Dimethenamid-P (Outlook) BASF	15**		Registered for control of grass and broadleaf weeds, including **Pigweed** in sweet corn, beans, peas, pumpkins and kabocha.		P		R4
Fluroxypyr (Starane) Corteva	4**		Registered for control of **Pigweed** in summer fallow, lucerne, sorghum, maize, millets and sweet corn.		P		R4
Norflurazon (Zoliar) AgNova	12**		Registered for control of **Pigweed** in citrus, grapes, almonds, pome fruit and stone fruit.		P		R4
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		R4
Sowthistle (*Sonchus oleraceus*) **Priority: Moderate**							
Sowthistle is rated as a moderate priority. Sowthistle is prolific and widespread in all regions, and it is also prone to development of herbicide resistance. Timely herbicide control can be effective provided that weeds are targeted when they are young and actively growing.							
Cyanazine	5**	Potatoes	Registered in potatoes for control of broadleaf weeds, including **Sowthistle**. Apply just before or as the crop is emerging.	NR	A	TAS	R3
Dicamba	4**	Potatoes / After Haulm Senescence	Registered in potatoes for control of Blackberry Nightshade, Chickweed, Climbing Buckwheat / Black Bindweed, Clover, Docks, Fat Hen, **Thistles** and Wireweed / Hogweed. Apply as a broadcast or banded spray after haulm senescence.	NR G:7	A	TAS	R3
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Linuron	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Common Sowthistle**. Apply as a broadcast or banded spray after planting but before crop emergence. Incorporate by irrigation or rainfall as soon as possible after application.	NR	A	ALL	R4
Metobromuron (Soleto) GroChem	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Sowthistle**. Apply 1 broadcast or banded spray after ridging and prior to crop emergence.	NR	A	ALL	R4
Metribuzin	5**	Potatoes	Registered in potatoes for control of grass & broadleaf weeds, including **Sowthistle**. Apply as a broadcast or banded spray at early crop emergence stage.	NR	A	ALL	R4
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Amitrole	34**	Potatoes / Pre-Harvest Preparation	Registered in potatoes for control of Ryegrass, Winter Grass, Capeweed and Paterson's Curse. Registered for control of **Sowthistle** in fallow.	NR	P-A	VIC & TAS	R3
Bromoxynil (Maya) Nufarm	6**		Registered for control of broadleaf weeds, including **Sowthistle**, in bulb onions.		P		R3
Glufosinate-Ammonium (Basta) BASF	10**		Registered for control of grass and broadleaf weeds including **Sowthistle** in berries, tomatoes, beans and fallow.		P		R3
Isoxaben (Gallery) Corteva	29**		Registered for control of **Sowthistle** in non-crop, forests, fencelines, tree fruit & nut orchards, vineyards, nursery & amenity tree plantings.		P		R4
Napropamide (Devrinol)	0**		Registered for control of **Sowthistle** in almonds, grapevines, stone fruit, tomatoes and canola.		P		R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Nonanoic Acid (Beloukha)	-		Registered for control of **Sowthistle** in non-crop areas, turf, orchards & vineyards, fallow and forestry.		P		R4
Norflurazon (Zoliar) AgNova	12**		Registered for control of grass and broadleaf weeds including **Sowthistle** in asparagus, citrus, grapes, nuts, stone & pome fruits.		P		R4
Oxyfluorfen (Goal)	14**		Registered for control of grass and broadleaf weeds, including **Sowthistle** in fallow, Brassica vegetables and fruit and nut trees. Compatible with glyphosate and diquat/paraquat.		P		R4
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		R4
Spear Thistle (*Cirsium vulgare*) **Stemless Thistle** (*Onopordum acaulon*) **Tumbleweed / Russian Thistle** (*Salsola australis*) **Priority: Moderate**							
Spear Thistle, Stemless Thistle and Tumbleweed / Russian Thistle are rated as a moderate priority. Spear Thistle is a tall herb that may be annual, biennial or a short-lived perennial. Stemless Thistle is a prostate broadleaf annual that seeds prolifically and can spread rapidly if not controlled. Tumbleweed / Russian Thistle is a summer annual broadleaf weed that is highly invasive and prolific. Herbicide control can be effective when targeted to young, actively growing weeds.							
Cyanazine	5**	Potatoes	Registered in potatoes for control of broadleaf weeds, including **Spear Thistle**. Apply just before or as the crop is emerging.	NR	A	TAS	R3
Dicamba	4**	Potatoes / After Haulm Senescence	Registered in potatoes for control of Blackberry Nightshade, Chickweed, Climbing Buckwheat / Black Bindweed, Clover, Docks, Fat Hen, **Thistles** and Wireweed / Hogweed. Apply as a broadcast or banded spray after haulm senescence.	NR G:7	A	TAS	R3
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	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**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Amitrole	34**	Potatoes / Pre-Harvest Preparation	Registered in potatoes for control of Ryegrass, Winter Grass, Capeweed and Paterson's Curse. Registered for control of **Spear Thistle** seedlings in *Pinus radiata* plantations.	NR	P-A	VIC & TAS	R3
Nonanoic Acid (Beloukha)	-		Registered for control of **Spear Thistle** in non-crop areas and turf.		P		R4
Oxyfluorfen (Goal)	14**		Registered for control of **Spear Thistle** in pyrethrum.		P		R4
Turnip Weed (*Rapistrum rugosum*) **Priority: Moderate**							
Turnip Weed is rated as a moderate priority. It is a winter-growing, broadleaf weeds that competes aggressively and runs to seed quickly. Targeting early growth stages with herbicides is critical.							
2,4-D Ester	4**	Potatoes / Pre-Harvest Preparation	Registered in potatoes for control of broadleaf weeds, such as Clover, Variegated Thistle and Cruciferous Weeds. Apply 4-5 weeks before harvest after potato haulms have dried off.	NR	A	VIC & TAS	R4
Atrazine	5**	Potatoes / Pre-Harvest Preparation	Registered in potatoes for control of Capeweed, Clovers, **Cruciferous Weeds**, Paterson's Curse, Ryegrass, Variegated Thistle and Winter Grass. Apply after potato haulms have dried off and weeds are at seedling stage.	NR G:28	A	VIC & TAS	R3
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Bromoxynil (Maya) Nufarm	6**		Registered for control of **Turnip Weed** in bulb onions.		P		R3

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Fluroxypyr (Starane) Corteva	4**		Registered for control of **Turnip Weed** in winter cereals.		P		R4
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		R4
Wild Radish (*Raphanus raphanistrum*) **Priority: Moderate**							
Wild Radish is rated as a moderate priority. Wild Radish 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.							
2,4-D Ester	4**	Potatoes / Pre-Harvest Preparation	Registered in potatoes for control of broadleaf weeds, such as Clover, Variegated Thistle and Cruciferous Weeds. Apply 4-5 weeks before harvest after potato haulms have dried off.	NR	A	VIC & TAS	R4
Atrazine	5**	Potatoes / Pre-Harvest Preparation	Registered in potatoes for control of Capeweed, Clovers, **Cruciferous Weeds**, Paterson's Curse, Ryegrass, Variegated Thistle and Winter Grass. Apply after potato haulms have dried off and weeds are at seedling stage.	NR G:28	A	VIC & TAS	R3
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Linuron	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Wild Radish**. Apply as a broadcast or banded spray after planting but before crop emergence. Incorporate by irrigation or rainfall as soon as possible after application.	NR	A	ALL	R4
Metobromuron (Soleto) GroChem	5**	Potatoes	Registered in potatoes for control of annual grass and broadleaf weeds, including **Wild Radish**. Apply 1 broadcast or banded spray after ridging and prior to crop emergence.	NR	A	ALL	R4
Metribuzin	5**	Potatoes	Registered in potatoes for control of grass & broadleaf weeds, including **Wild Radish**. Apply as a broadcast or banded spray at early crop emergence stage.	NR	A	ALL	R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Paraquat (Gramoxone)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Registered as a pre-plant knockdown application for control of grass and broadleaf weeds.	NR	A	ALL	R1
Prometryn	5**	Potatoes / Pre-Emergence	Registered in potatoes for control broadleaf weeds and suppression of certain grass weeds, including **Wild Radish**. Apply as a pre-emergent spray to bare soil.	NR	A	ALL (excl. SA)	R4
Bromoxynil (Maya) Nufarm	6**		Registered for control of broadleaf weeds, including **Wild Radish**, in bulb onions.		P		R3
Flumioxazin (Chateau) Sumitomo	14**		Registered for control of **Wild Radish** in grapes, pome fruit, stone fruit, citrus, nut trees, olives, avocados and berries.		P		R4
Norflurazon (Zoliar) AgNova	12**		Registered for control of **Wild Radish** in citrus, grapes, almonds, pome fruit and stone fruit.		P		R4
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		R4

4.4 Plant Growth Regulators in Potato

4.4.1 Plant Growth Regulator Priorities

PGR Issue
High
Inhibition of sprouting
Moderate
Haulm desiccation

Inhibition of sprouting in tubers when in storage is a high priority for potatoes.

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 < 1 year
P	Potential - a possible candidate to pursue for registration or permit	R2	Medium-term: Maintaining access of significant concern <2-5 years
P-A	Potential, already approved in the crop for another use	R3	Long-term: Potential issues associated with use - Monitoring required < 5 years
		R4	No current risk / concerns

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
Inhibition of sprouting **Priority: High**							
Inhibition of sprouting is rated as a high priority. Effective sprout inhibition plays an important role in maintaining potato quality in storage. A combination of storage environment and chemical or natural suppressants is required.							
Chlorpropham (Aceto Sprout Nip Briquette Potato Stop Sprout)	PGR	Potatoes / Post-Harvest Fumigation	Registered in stored table potatoes for vapour phase treatment to prevent sprouting. Place briquettes into fogging equipment for application into sealed storage shed. Retreatment may be required if monitoring indicates a drop to below critical levels.	NR	A	ALL	R4
Maleic Hydrazide as Potassium Salt (Royal MH-30 Xtra)	PGR	Potatoes	Registered in potatoes for control of premature sprouting of tubers. Apply as a foliar spray 1 week after blossom fall, or 2 weeks after full bloom. In situations where good flowering does not occur, spray immediately upon the first sign of yellowing of the tops, usually 4-6 weeks before harvest.	NR	A	ALL	R4

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use	WHP (days)	Availability	States	Regulatory risk
Pelargonic Acid (Scyth)	-		US registration as a harvest aid and desiccation in root & tuber vegetables.		P		R4
Pyraflufen-Ethyl (Vida)	-		US registration for pre-harvest desiccation of potatoes.		P		R4
Crop Desiccation Priority: Moderate							
Haulm desiccation is rated as a moderate priority. Haulm desiccation is a critical process that can be achieved by mechanical or chemical methods or using a combination of both. Timely haulm destruction is important to stop tuber bulking and achieve skin set, as well as prevent re-growth and the spread of virus and diseases.							
Carfentrazone	14**	Potato / Haulm Desiccation	Registered in potatoes for haulm desiccation. Apply as a broadcast spray once tubers are fully developed and at the required size for harvest.	NR G:14	A	ALL	R4
Diquat (Reglone)	22**	Potato / Haulm Desiccation	Registered in potatoes for haulm desiccation. Apply as a broadcast spray as soon as the crop is ready to harvest.	7 G:1	A	ALL	R1

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
MRL Databases (DAFF)	https://www.agriculture.gov.au/agriculture-land/farm-food-drought/food/nrs/databases
APVMA Permit search	https://productsearch.apvma.gov.au/permits
APVMA Product search	https://productsearch.apvma.gov.au/products
AUSVEG	https://ausveg.com.au
Cotton Pest Management Guide 2025-26	https://www.cottoninfo.com.au/publications/cotton-pest-management-guide
CropLife Australia (resistance management)	https://www.croplife.org.au/resources/programs/resistance-management/
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 potato
Appendix 2. Products available for control of insects and mites in potato
Appendix 3. Products available for weed control in potato
Appendix 4. Plant Growth Regulators available in potato
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Appendix 1. Products available for disease control in potato

Active Ingredient (Trade Name)	Chemical group	Situation	Diseases / Comments	States	WHP Days	Regulatory risk
1,3-Dichloropropene + Chloropicrin (Agrocelone)	8B	Vegetables / Soil fumigant	Plant parasitic nematodes, symphylans, wireworms, soil borne diseases (including *Fusarium*, *Verticillium* wilts, *Rhizoctonia*, & *Pythium*) and suppression of weeds. *For use by professional and registered fumigators only.*	ALL	NR	R4
Amisulbrom (Amishield)	21	Potatoes	Powdery Scab (*Spongospora subterranea*) Suppression of: Pink Rot (*Phytophthora erythroseptica*)	ALL	NR	R4
Azoxystrobin (Amistar)	11	Potatoes	Early Blight / Target Spot (*Alternaria solani*) Late Blight (*Phytophthora infestans*) Black Scurf (*Rhizoctonia solani*) Suppression of: Silver Scurf (*Helminthosporium solani*)	ALL	NR	R4
Azoxystrobin + Difenoconazole (Amistar Top)	11+3	Potatoes	Early Blight / Target Spot (*Alternaria solani*) Late Blight (*Phytophthora infestans*)	ALL	7	R3
Bacillus amyloliquefaciens strain QST 713 (Serenade Prime) Bayer	BM02	Potatoes	Suppression of: Black Scurf / Rhizoctonia Root Rot (*Rhizoctonia solani*)	ALL	NR	R4
Boscalid (Filan) BASF	7	Root & Tuber Vegetables	Sclerotinia Rot (*Sclerotinia minor*, *S.sclerotorium*)	ALL	7	R4
Boscalid + Metiram / Mancozeb 750DF (Filan + Metiram / Mancozeb 750DF)	7+M3	Potatoes	Early Blight (*Alternaria solani*)	ALL	7	R2
Boscalid + Mancozeb 420SC (Filan + Mancozeb 420SC)					14	

Active Ingredient (Trade Name)	Chemical group	Situation	Diseases / Comments	States	WHP Days	Regulatory risk
Bromo Chloro Dimethyl Hydantoin (BCDMH)	-	Sanitiser / Post-Harvest Treatment	External Rot Causing Organisms	ALL	NR	R4
Chlorine	-	Sanitiser / Post-Harvest Treatment	Bacteria & Fungi	ALL	NR	R4
Chlorothalonil (Bravo)	M5	Potato	Early Blight / Target Spot (*Alternaria solani*) Late Blight / Irish Blight (*Phytophthora infestans*)	ALL	NR	R2
Copper	M1	Potatoes	Target Spot Irish Blight	ALL	1	R4
Cyazofamid (Ranman) UPL	21	Potatoes	Late Blight (*Phytophthora infestans*)	ALL	7	R4
Cyproconazole (Alto)	3	Potatoes	Early Blight / Target Spot (*Alternaria solani*) Late Blight / Irish Blight (*Phytophthora infestans*)	QLD	14 G:14	R3
Difenoconazole (Score)	3	Potatoes	Early Blight / Target Spot (*Alternaria solani*)	ALL	7	R3
Dimethomorph (Acrobat)	40	Potatoes	Early Blight (*Alternaria solani*) Late Blight (*Phytophthora infestans*)	ALL	14	R4
Dazomet (Basamid)	8F	General soil fumigant	Pre-plant fumigant in seed beds for control of soil fungi including *Pythium*, *Phytophthora*, *Sclerotinia*, *Sclerotium*, *Rhizoctonia*, *Verticillium*, *Plasmodiophora*, *Armillaria* and *Fusarium* spp. Nematodes, plus insects, weeds & soil fungi	ALL	NR	R4
Fluazinam	29	Potatoes	Late Blight (*Phytophthora infestans*) Sclerotinia (*Sclerotinia* spp.)	ALL	14 NG	R4
Fluazinam PER96705	29	Potatoes	Suppression of: Powdery Scab (*Spongospora subterranea*)	TAS	NR NG	R4
Fluazinam + Azoxystrobin (Drabant) FMC	29+11	Potatoes	Early Blight / Target Spot (*Alternaria solani*) Late Blight (*Phytophthora infestans*)	ALL	14	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Diseases / Comments	States	WHP Days	Regulatory risk
Fludioxonil (Maxim 100 FS) Syngenta	12	Potatoes	Black Dot (*Colletotrichum coccodes*) Black Scurf (*Rhizoctonia solani*) Fusarium Dry Rot (*Fusarium* spp.) Silver Scurf (*Helminthosporium solani*) Suppression of: Seed borne Common Scab (*Streptomyces* spp.)	ALL	NR	R4
Fludioxonil + Sedaxane (Vibrance Premium) Syngenta	12+7	Potatoes	Black Dot (*Colletotrichum coccodes*) Black Scurf (*Rhizoctonia solani*) Fusarium Dry Rot (*Fusarium* spp.) Gangrene (*Phoma exigua*) Silver Scurf (*Helminthosporium solani*) Suppression of: Seed borne Common Scab (*Streptomyces* spp.)	ALL	NR	R4
Flutolanil (Moncut SC) Sipcam	7	Potatoes	Black Scurf (*Rhizoctonia solani*)	ALL	NR	R4
Hydrogen Peroxide + Peroxyacetic Acid (Peratec Plus)	M	Potatoes (seed)	Powdery Scab (*Spongospora subterranean*) Rhizoctonia Rot / Black Scurf (*Rhizoctonia solani*)	ALL	NR	R4
Imazalil (Magnate 750 WSP)	3	Potato Tubers	Silver Scurf (*Helminthosporim solani*) Gangrene (*Phoma exigua*) Dry Rot (*Fusarium* spp.)	ALL	NR	R4
Inpyrfluxam (Excalia) Sumitomo	7	Potatoes	Rhizoctonia (*Rhizoctonia solani*)	ALL	NR	R4
Iodine	-	Root crops	Post-Harvest Sanitiser – Bacteria and Fungi	ALL	NR	R4
Iprodione (Rovral)	2	Potatoes	Sclerotinia Rot (*Sclerotinia sclerotiorum*) Target Spot / Early Blight (*Alternaria solani*) Hypocotyl Rot / Black Scurf (*Rhizoctonia solani*)	ALL	NR	R4
Mancozeb	M3	Potatoes	Early Blight Late Blight	ALL	NR	R2

Active Ingredient (Trade Name)	Chemical group	Situation	Diseases / Comments	States	WHP Days	Regulatory risk
Mancozeb + Dimethomorph (Acrobat WDG) BASF	M3+40	Potatoes	Late Blight (*Phytophthora infestans*) Early Blight (*Alternaria solani*)	ALL	49	R2
Mancozeb + Metalaxyl (Ridomil Gold MZ) Syngenta	M3+4	Potatoes	Early Blight Late Blight	ALL	7	R2
			Pink Rot	VIC, TAS, SA & WA		
Metalaxyl-M (Ridomil Gold 480SL) Syngenta	4	Potatoes	Pink Rot (*Phytophthora erythroseptica*)	VIC, SA, WA & TAS	NR	R4
Metham Sodium	-	Food Crops / Pre-Plant Fumigant	Fungal diseases including *Rhizoctonia*, *Pythium*, *Fusarium*, *Phytophthora*, *Verticillium*, *Sclerotinia* and Club Root of crucifers & Nematodes	ALL	NR	R4
Metiram (Polyram) BASF	M3	Potatoes	Early Blight / Target Spot (*Alternaria solani*) Late Blight / Irish Blight (*Phytophthora infestans*)	ALL	7	R2
Metiram + Pyraclostrobin (Aero) BASF	M3+11	Potatoes	Early Blight (*Alternaria solani*) Late Blight / Irish Blight (*Phytophthora infestans*)	ALL	7	R2
Pencycuron (Monceren 125 DS) Gowan	20	Potatoes	Black Scurf (*Rhizoctonia solani*)	ALL	NR	R4
Penflufen (Emesto Prime) Bayer	7	Potatoes	Black Scurf / Rhizoctonia Root Rot (*Rhizoctonia solani*)	ALL	NR	R4
Penthiopyrad (Fontelis) Corteva	7	Potatoes	Early Blight (*Alternaria* spp.) Powdery Mildew (*Erisiphe* spp.)	ALL	7	R4
Peroxyacetic Acid	M	Sanitiser / Post-Harvest Treatment	Bacteria	ALL	NR	R4
Phosphorous Acid PER94059	33	Potato	Pink Rot (*Phytophthora erythroseptica)*	TAS	NR NG	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Diseases / Comments	States	WHP Days	Regulatory risk
Procymidone (Sumisclex)	2	Potato	Sclerotinia (*Sclerotinia minor*) Target Spot (*Alternaria solani*)	ALL	21	R4
Propamocarb Hydrochloride + Fluopicolide (Infinito SC) Bayer	28+43	Potatoes	Late Blight (*Phytophthora infestans*)	ALL	14	R4
Propineb (Antracol)	M3	Potatoes	Target Spot / Early Blight Irish Blight / Late Blight	ALL	1	R2
Pydiflumetofen (Miravis Adepidyn) Syngenta	7	Potatoes	Target Spot / Early Blight (*Alternaria solani*)	ALL	7	R4
Pydiflumetofen + Difenoconazole (Miravis Duo) Syngenta	7+3	Root & Tuber Vegetables, including Potatoes	Early Blight / Target Spot (*Alternaria* spp.) Powdery Mildew (*Erysiphe* spp., *Oidium* spp.) Cercospora Leaf Spot (*Cercospora* spp.)	ALL	1 NG	R3
Pydiflumetofen + Fludioxonil (Miravis Prime) Syngenta	7+12	Potato	White Mould (*Sclerotinia sclerotiorum*) Grey Mould (*Botrytis cinerea*) Early Blight (*Alternaria solani*)	ALL	14 NG	R4
Pyrimethanil (Pyper 600 SC)	9	Potatoes	Target Spot / Early Blight (*Alternaria solani*)	ALL	NR	R4
Quintozene (Terrachlor)	14	Potato	Black Scurf (*Rhizoctonia solani*)	ALL	28 NG	R4
Streptomyces lydicus WYEC108 (Actinovate) Novozymes Bioag	BM 02	Vegetables	As a seed treatment for *Fusarium, Rhizoctonia* & *Pythium* Management	ALL	NR	R4
Sulphur	M2	Vegetables	Powdery Mildew and Rust	ALL	NR	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Diseases / Comments	States	WHP Days	Regulatory risk
Thiabendazole (Tecto)	1	Potatoes	Dry Rot (*Fusarium* spp.) Gangrene (*Phoma exigua*) Silver Scurf (*Helminthosporium solani*)	ALL	NR	R4
Tolclofos-Methyl (Rizolex) Sumitomo	14	Potatoes	Rhizoctonia (*Rhizoctonia solani*)	ALL	NR	R4
Zineb	M3	Potatoes	Early Blight Late Blight	ALL	NR	R2

Appendix 2. Products available for control of insects and mites in potato

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
1,3-Dichloropropene + Chloropicrin + (Telone C-35)	8	Vegetables	Soil borne pests including Nematodes. *For use by professional and registered fumigators only.*	ALL	NR	R4
Abamectin (Tervigo) Syngenta	6	Potato	Root-Knot Nematode (*Meloidogyne* spp.)	ALL	NR	R3
Abamectin PER84249	6	Potato	Tomato Potato Psyllid (*Bactericera cockerelli*)	ALL (excl. VIC)	14 NG	R3
Abamectin PER96481	6	Root & Tuber Vegetables	Suppression of Leafminers (*Liriomyza* spp.) including Vegetable Leafminer (*Liriomyza sativae*) Serpentine Leafminer (*Liriomyza huidobrensis*)	ALL (excl. VIC)	14 NG	R3
Abamectin PER14722	6	Potato	Tomato Red Spider Mite (*Tetranychus evansi*)	ALL (excl. VIC)	14 NG	R3
Acephate	1B	Potatoes	Potato Moth / Tobacco Leafminer	ALL	3	R3
Acetamiprid	4A	Potatoes	Green Peach Aphid (*Myzus persicae*)	ALL	7 NG	R2
Afidopyropen (Versys) BASF	9D	Potato	Green Peach Aphid (*Myzus persicae*) Cabbage Aphid (*Brevicoryne brassicae*) Currant Lettuce Aphid (*Nasonovia ribis-nigri*) Cotton Aphid / Melon Aphid (*Aphis gossypii*)	ALL	7	R4
Alpha-Cypermethrin PER12612	3A	Potatoes	Garden Weevil (*Phlyctinus callosus*)	WA & TAS	14 G:35	R3
Bacillus thuringiensis subsp. kurstaki (DiPel)	11A	Vegetables	Lepidoptera	ALL	NR	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
Beauveria bassiana (Velifer) BASF	UNF	Protected vegetables and ornamentals	Suppression of various pests including Western Flower Thrips, Onion Thrips, Greenhouse Whitefly, Silverleaf Whitefly, Sweet Potato Whitefly, Green Peach Aphid & Two-Spotted Spider Mites.	ALL	NR	R4
Carbaryl	1A	Potatoes	Potato Moth Wingless Grasshopper Green Vegetable Bug Heliothis (Budworms) Leaf Eating Ladybird Cutworms European Earwig Rutherglen Bug Armyworms	ALL	3	R4
Chlorantraniliprole (Coragen) FMC	28	Potatoes	Cotton Bollworm (*Helicoverpa armigera*) Native Budworm (*Helicoverpa punctigera*) Potato Moth (*Phthorimaea operculella*)	ALL	NR G:7	R4
Cyantraniliprole (Benevia) FMC	28	Potatoes	Silverleaf Whitefly (*Bemisia tabaci*) Cotton Bollworm (*Helicoverpa armigera*) Native Budworm (*Helicoverpa punctigera*) Potato Tuber Moth (*Phthorimaea operculella*) Suppression of: Green Peach Aphid (*Myzus persicae*) Plague Thrips (*Thrips imaginis*)	ALL	7 NG	R4
Cyantraniliprole (Benevia) FMC PER84805	28	Potatoes	Tomato Potato Psyllid (*Bactericera cockerelli*)	ALL (excl. VIC)	14 NG	R4
Cyantraniliprole (Benevia) FMC PER93849	28	Potatoes	Leafminers (*Liriomyza* spp.) including: Vegetable Leafminer (*Liriomyza sativae*) Serpentine Leafminer (*Liriomyza huidobrensis*)	ALL (excl. VIC)	7 NG	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
Cyromazine (Diptex 150WP) PER81867	17	Root & Tuber vegetables	Liriomyza Leafminers including Vegetable Leafminer (*Liriomyza sativae*) Serpentine Leafminer (*Liriomyza huidobrensis*)	ALL	7 NG	R4
Dazomet (Basamid)	8F	Soil fumigant	Soil fungi, Nematodes, soil insects and weeds.	ALL	NR	R4
Dimethoate	1B	Potatoes	Aphids, Jassids, Green Vegetable Bug, Thrips, Wingless Grasshopper	ALL	14	R3
Emulsifiable Botanical Oil (Eco-Oil)	-	Vegetables	Greenhouse Whitefly	ALL	NR	R4
Fipronil (Regent)	2B	Potatoes	Wireworm Mole Cricket Whitefringed Weevil (*Naupactus leucoloma*)	ALL	NR NG	R2
Flonicamid (Mainman) UPL	29	Potatoes	Green Peach Aphid (*Myzus persicae*) Melon Aphid (*Aphis gossypii*) Potato Aphid (*Macrosiphum euphorbiae*)	ALL	14 NG	R4
Fluazaindolizine (Salibro Reklemel) Corteva	N-UN	Root & Tuber Vegetables including Potato	Root-Knot Nematode (*Meloidogyne* spp.)	ALL	NR	R4
Flubendiamide (Belt) Bayer	28	Root & Tuber Vegetables including Potato	Diamondback Moth (*Plutella xylostella*) Cabbage White Butterfly (*Pieris rapae*) Cluster Caterpillar (*Spodoptera litura*) Potato Moth / Tomato Leafminer (*Phthorimaea operculella*) Heliothis (*Helicoverpa* spp.)	ALL	1	R4
Fluensulfone (Nimitz) Adama	-	Potatoes	Root-Knot Nematode (*Meloidogyne* spp.)	ALL	NR	R4
Fluopyram (Velum Prime) Bayer	N-3	Potatoes	Root-Knot Nematode (*Meloidogyne* spp.)	ALL	NR	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
Flupyradifurone (Sivanto Prime) Bayer	4D	Potatoes	Green Peach Aphid (*Myzus persicae*) Silverleaf Whitefly (*Bemisia tabaci*)	ALL	7	R4
Gamma-Cyhalothrin (Trojan) FMC	3A	Potatoes	Vegetable Leafhopper (*Austroasca viridigrisea*)	ALL	7	R4
Garlic + Chilli + Pyrethrins + Piperonyl Butoxide	3A	Vegetables	Ants, Aphids, Caterpillars, Earwigs, Whitefly, Thrips and Leafhoppers. Suitable for organic growers	ALL	1	R4
Hexythiazox (Calibre) PER95394	10A	Potatoes	Tomato Red Spider Mite (*Tetranychus evansi*)	ALL	21	R4
Imidacloprid	4A	Potato	Green Peach Aphid	ALL	7 NG	R2
Iron EDTA	-	Vegetables	Snails & Slugs	ALL	NR	R4
Lambda-Cyhalothrin (Karate Zeon) PER84249	3A	Potato	Tomato Potato Psyllid (*Bactericera cockerelli*)	ALL (excl. VIC)	7 NG	R4
Metaldehyde	-	Vegetables	Snails & Slugs	ALL	7 NG	R4
Metaldehyde + Fipronil (Transcend) Imtrade	2B	Potato	European Earwigs Portugese Millipedes Slaters Snails & Slugs	ALL	NR NG	R2
Metham Sodium	-	Pre-Plant Soil Fumigant	Plant parasitic Nematodes, weed seeds, and various fungal diseases	ALL	NR	R4
Methomyl	1A	Potatoes	Potato Moth	ALL	NR	R2
			Potato Looper	QLD & WA		
Methomyl PER84249	1A	Potato	Tomato Potato Psyllid (*Bactericera cockerelli*)	ALL (excl. VIC)	NR	R2

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
Methomyl PER82428	1A	Root & Tuber Vegetables	*Helicoverpa* spp. Cucumber Moth Cluster Caterpillar Loopers Webworm Rutherglen Bug Thrips including Western Flower Thrips	ALL	7	R2
Nuclear Polyhedrosis Virus of *Helicoverpa armigera* (Vivus Max) AgBiTech	31	Potatoes	Cotton Bollworm (*Helicoverpa armigera*) Native Budworm (*Helicoverpa punctigera*)	ALL	NR	R4
Permethrin (Ambush)	3A	Potatoes	Potato Moth (*Phthorimaea operculella*)	ALL	2	R3
Phorate (Thimet)	1B	Potatoes	Aphids Thrips Jassids Two-Spotted Mite Wireworm	ALL	91	R2
Pirimicarb (Aphidex)	1A	Potatoes	Potato Aphid	ALL	2	R4
Potassium Salts of Fatty Acids (Natrasoap)	-	Vegetables	Aphids, Thrips, Mealybug, Two Spotted Mites, Spider Mite and Whitefly	ALL	NR	R4
Propargite (Omite)	12C	Vegetables	Two-Spotted Mites & Spider Mites.	ALL	7	R3
Pymetrozine (Chess) Syngenta	9B	Potatoes	Green Peach Aphid (*Myzus persicae*)	ALL	NR	R3

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
Spinetoram (Success Neo) Corteva	5	Root & Tuber Vegetables including Potatoes	*Helicoverpa* spp. Light Brown Apple Moth Loopers Potato Moth Tomato Potato Psyllid	ALL	3	R4
Spinetoram (Success Neo) Corteva PER94451	5	Root & Tuber Vegetables including potato	Liriomyza Leafminers, including Vegetable Leafminer (*Liriomyza sativa*) Pea Leafminer / Serpentine Leafminer (*Liriomyza huidobrensis*) American Serpentine Leafminer (*Liriomyza trifolii*)	ALL (excl. VIC)	3	R4
Spinosad (Entrust Organic) Corteva	5	Root & Tuber Vegetables including Potato	Light Brown Apple Moth Loopers *Helicoverpa* spp. Potato Moth	ALL	3 G:14	R4
Spinosad (Entrust Organic) Corteva PER89870	5	Root & Tuber Vegetables	Fall Armyworm (*Spodoptera frugiperda*)	ALL (excl. VIC)	3 G:14	R4
Spinosad (Entrust Organic) Corteva PER96806	5	Root & Tuber Vegetables, including Potatoes	Leafminers (*Liriomyza* spp.) including Vegetable Leafminer (*Liriomyza sativae*) Pea Leafminer / Serpentine Leafminer (*Liriomyza huidobrensis)* American Serpentine Leafminer (*Liriomyza trifolii*)	ALL (excl. VIC)	3 G:14	R4
Spirotetramat (Movento) Bayer	23	Potatoes	Green Peach Aphid (*Myzus persicae*) Silverleaf Whitefly (*Bemisia tabaci*)	ALL	7	R4
Spirotetramat (Movento) Bayer PER84245	23	Potato	Tomato Potato Psyllid (*Bactericera cockerelli*)	ALL	7	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
Spodoptera frugiperda Multiple Nucleopolyhedrovirus (Spodovir Plus) OCP PER91477	31	Root & Tuber Vegetables	Fall Armyworm (*Spodoptera frugiperda*)	ALL	NR	R4
Spodoptera frugiperda Multiple Nucleopolyhedrovirus (Fawligen) AgBiTech PER90820	31	Root & Tuber Vegetables	Fall Armyworm (*Spodoptera frugiperda*)	ALL	NR	R4
Sulfoxaflor (Transform) Corteva	4C	Root & Tuber Vegetables	Green Peach Aphid Suppression of: Tomato Potato Psyllid Rutherglen Bug	ALL	7	R4
Sulphur	UN	Vegetables	Mites	ALL	NR	R4
Thiodicarb (Larvin)	1A	Potatoes	Budworms (*Helicoverpa* spp.)	ALL	7 G:21	R3
Trichlorfon (Lepidex)	1B	Vegetables	Cabbage White Butterfly, Cabbage Moth, Rutherglen Bug & Green Vegetable Bug	ALL	2	R3

Appendix 3. Products available for weed control in potato

Active Ingredient (Trade Name)	Chemical Group	Situation	Comment / Use / Weed	WHP (days)	States	Regulatory risk
1,3-dichloropropene + Chloropicrin + (Telone C-35)	8	Vegetables	Plant parasitic Nematodes, Symphylans, Wireworms, soil borne diseases and suppression of weeds. *For use by professional and registered fumigators only.*	NR	ALL	R4
2,2-DPA (Dalapon)	0**	Potatoes	Annual and Perennial Grasses	7	ALL	R4
2,4-D Ester	4**	Potatoes / Pre-Harvest Preparation	Broadleaf Weeds, such as Clover Variegated Thistle Cruciferous Weeds	NR	VIC & TAS	R4
Amitrole	34**	Potatoes / Pre-Harvest Preparation	Ryegrass Winter Grass Capeweed Paterson's Curse	NR	VIC & TAS	R3
Asulam	18**	Potatoes	Docks	NR	VIC & TAS	R4
Atrazine	5**	Potatoes / Pre-Harvest Preparation	Capeweed Clovers Cruciferous Weeds Paterson's Curse Ryegrass Variegated Thistle Winter Grass	NR G:28	VIC & TAS	R3
Carfentrazone	14**	Potato	Haulm desiccation	NR G:14	ALL	R4
Clethodim (Select)	1***	Potatoes / Post-Emergent	Grass Weeds	28	ALL	R4

Active Ingredient (Trade Name)	Chemical Group	Situation	Comment / Use / Weed	WHP (days)	States	Regulatory risk
Clomazone	13**	Potatoes	Apple of Peru Blackberry Nightshade Fat Hen Pig Weed Potato Weed Suppression of: Amaranth	NR	TAS	R4
Cyanazine	5**	Potatoes	Broadleaf Weeds	NR	TAS	R3
Dicamba	4**	Potatoes / After Haulm Senescence	Blackberry Nightshade Chickweed Climbing Buckwheat / Black Bindweed Clover Docks, Fat Hen Thistles Wireweed / Hogweed	NR G:7	TAS	R3
Ethyl Dipropylthiocarbamate (Eptam)	15**	Potatoes	Grass & Broadleaf Weeds	NR	NSW, ACT & QLD	R4
Fluazifop-P-Butyl (Fusilade)	1***	Potatoes / 15 cm or less in height	Grass Weeds	70	ALL	R3
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Grass and Broadleaf Weeds	NR	ALL	R3
Linuron	5**	Potatoes	Annual Grass and Broadleaf Weeds	NR	ALL	R4
Metobromuron (Soleto) GroChem	5**	Potatoes	Annual Grass and Broadleaf Weeds	NR	ALL	R4

Active Ingredient (Trade Name)	Chemical Group	Situation	Comment / Use / Weed	WHP (days)	States	Regulatory risk
Metribuzin	5**	Potatoes	Grass and Broadleaf Weeds	NR	ALL	R4
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Crop Desiccation Annual Grass and Broadleaf Weeds	7	ALL	R1
		Potatoes / In-Crop and Pre-Harvest Weed Control		NR G:1		
Paraquat (Gramoxone)	22**	Potatoes / In-Crop and Pre-Harvest Weed Control	Annual Grass and Broadleaf Weeds	NR G:1	ALL	R1
Prometryn	5**	Potatoes / Pre-Emergence	Grass and Broadleaf Weeds	NR	ALL (excl. SA)	R4
Quizalofop-P-Ethyl	1***	Potatoes / Post Emergent	Grass Weeds	70	ALL	R4
Sethoxydim (Sertin)	1***	Potatoes / Post-Emergent	Grass Weeds	NR	ALL	R4
S-Metolachlor + Prosulfocarb (Boxer Gold)	15**	Potatoes	Grass and Broadleaf Weeds	NR	ALL	R4

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

Appendix 4. Plant Growth Regulators available in potato

Active ingredient (Trade Name)	Chemical Group	Situation	Comment / Use	WHP (days)	States	Regulatory risk
Carfentrazone	14**	Potato	Haulm desiccation	NR G:14	ALL	R4
Chlorpropham (Aceto Sprout Nip Briquette Potato Stop Sprout)	PGR	Potatoes / Post-Harvest Fumigation	Prevention of Sprouting	NR	ALL	R4
Diquat (Reglone)	22**	Potato / Haulm Desiccation	Haulm Desiccation	7 G:1	ALL	R1
Maleic Hydrazide as Potassium Salt (Royal MH-30 Xtra)	PGR	Potatoes	Inhibit premature sprouting of tubers	NR	ALL	R4

Appendix 5. Current permits for use in potato

Permit No.	Description	Issued Date	Expiry Date	Permit Holder
PER84249 Version 3	Various Products / Potato / Tomato Potato Psyllid	16-Jun-17	30-Sep-26	NSW Dept Primary Industries
PER81867 Version 3	Cyromazine (Diptex) / Root & Tuber Vegetables / Liriomyza Leafminers	02-Dec-19	30-Sep-26	Hort Innovation
PER93849 Version 2	Cyantraniliprole (Benevia) / Potatoes / Liriomyza Leafminers	18-Dec-23	31-Dec-26	Hort Innovation
PER91477 Version 4	*Spodoptera frugiperda* Multiple Nucleopolyhedrovirus (Spodovir Plus) / Root & Tuber Vegetables / Fall Armyworm	03-Nov-21	31-Mar-27	Andermatt Group
PER90820 Version 4	*Spodoptera frugiperda* Multiple Nucleopolyhedrovirus (Fawligen) / Root & Tuber Vegetables / Fall Armyworm	30-Mar-21	31-Mar-27	AgBiTech
PER94451	Spinetoram (Success Neo) / Potato / Liriomyza Leafminers	05-Jul-24	31-Jul-27	Hort Innovation
PER96705	Fluazinam / Potatoes / Powdery Scab	28-Oct-25	31-Oct-27	Dept Natural Resources & Environment TAS
PER84805 Version 2	Cyantraniliprole (Benevia) / Potatoes / Tomato Potato Psyllid	06-Dec-17	31-Dec-27	Hort Innovation
PER96481	Abamectin / Root & Tuber Vegetables / Liriomyza Leafminers	08-Aug-25	31-Jul-28	Hort Innovation
PER94059 Version 2	Phosphorous Acid / Potato / Pink Rot	20-Feb-24	30-Nov-28	EE Muir & Sons
PER82428 Version 5	Methomyl / Root & Tuber Vegetables / *Helicoverpa* spp., Cucumber Moth, Cluster Caterpillar, Looper, Webworm, Rutherglen Bug, Thrips including Western Flower Thrips	22-Apr-16	31-Jan-29	Hort Innovation
PER95394	Hexythiazox (Calibre) / Potatoes / Tomato Red Spider Mite	23-Sep-24	30-Sep-29	Hort Innovation
PER84245 Version 3	Spirotetramat (Movento) / Potato / Tomato Potato Psyllid	07-Apr-17	31-Dec-29	NSW Dept Primary Industries
PER14722 Version 4	Abamectin / Potato / Tomato Red Spider Mite	17-Feb-15	31-May-30	Hort Innovation
PER89870 Version 3	Spinosad (Entrust Organic) / Root & Tuber Vegetables / Fall Armyworm	21-Jul-20	31-Oct-30	Hort Innovation

Permit No.	Description	Issued Date	Expiry Date	Permit Holder
PER12612 Version 5	Alpha-Cypermethrin / Potatoes / Garden Weevil	29-Jun-11	28-Feb-31	Hort Innovation
PER96806	Spinosad / Root & Tuber Vegetables / Dipteran Leafminers	5-May-26	30-May-31	Hort Innovation

Appendix 6. Potato Maximum Residue Limits (MRLs)

CODEX commodity groupings of root and tuber vegetables and subgroups:

VR 0075 Root and tuber vegetables
VR 0589 Potato
VR 2020 Root vegetables
VR 2071 Tuberous & Corm Vegetables
Vegetables

Note: Major export markets for potatoes include South Korea, Philippines, Indonesia, Taiwan and Singapore. Available information indicates that in the absence specific limits in legislation the most 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	Description	APVMA MRL mg/kg	Codex MRL mg/kg
1,4-Dimethylnaphthalene	VR0589	Potato	-	Po15
2,2-DPA		Vegetables	*0.1	-
2,4-D	VR0589	Potato	0.1	0.2
Abamectin	VR0075	Root and tuber vegetables	*0.01	-
	VR0589	Potato	-	*0.005
Acephate	VR0589	Potato	0.5	-
Acetamiprid	VR0589	Potato	*0.05	-
Acetochlor	VR0589	Potato	-	*0.04
Afidopyropen	VR0589	Potato	*0.01	-
	VR2071	Tuberous & corm vegetables	-	*0.01
Aldrin and Dieldrin	VR0075	Root and tuber vegetables	E0.1	E0.1
Ametoctradin	VR0589	Potato	-	0.05
Amisulbrom	VR0589	Potato	0.3	-
Amitrole	VR0589	Potato	*0.05	-
Asulam	VR0589	Potato	0.4	-
Atrazine	VR0589	Potato	*0.01	-
Azoxystrobin	VR0589	Potato	0.05	Po7
Benalaxyl	VR0589	Potato	0.05	Po7
Bentazone	VR0589	Potato	-	0.1
Benzovindiflupyr	VR0589	Potato	-	0.02
Bifenthrin	VR0075	Root and tuber vegetables	-	0.05
Bixafen	VR0075	Root and tuber vegetables	-	0.06
Boscalid	VR0075	Root and tuber vegetables	1	2
Broflanilide	VR2071	Tuberous & corm vegetables	-	0.04
Captan	VR0589	Potato	0.05	Po7
Carbaryl	VR0589	Potato	0.1	0.1
Carfentrazone-ethyl	VR0589	Potato	*0.05	-
Chlorantraniliprole	VR0075	Root and tuber vegetables {except carrot; radish}	-	0.02
	VR0589	Potato	*0.01	-
Chlordane		Vegetables {except fruiting vegetables, cucurbits; sugar beet}	E0.02	-

Chemical	Codex	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Chlorfenapyr	VR0589	Potato	-	*0.01
Chlorothalonil	VR0075	Root and tuber vegetables {except horseradish}	-	0.3
	VR0589	Potato	0.1	-
Chlorpropham	VR0589	Potato	30	Po30
Chlorpyrifos	VR0589	Potato	0.05	-
Chlorpyrifos-methyl	VR0589	Potato	-	*0.01
Clethodim	VR0589	Potato	-	0.5
Clomazone	VR0589	Potato	*0.05	-
Clothianidin	VR0075	Root and tuber vegetables	-	0.2
Cyanazine	VR0589	Potato	0.02	-
Cyantraniliprole	VR0589	Potato	0.05	0.05
Cyazofamid	VR0589	Potato	*0.01	*0.01
Cyclaniliprole	VR2071	Tuberous & corm vegetables	-	*0.01
Cycloxydim	VR0589	Potato	-	3
Cyfluthrin / Beta-cyfluthrin	VR0589	Potato	-	*0.01
Cyhalothrin (includes lambda-cyhalothrin)	VR0075	Root and tuber vegetables	-	*0.01
	VR0589	Potato	*0.01	-
Cypermethrins (including alpha- and zeta- cypermethrin)	VR0075	Root and tuber vegetables {except sugar beet}	-	*0.01
	VR0589	Potato	*0.01	-
Cyproconazole	VR0589	Potato	*0.02	-
Cyprodinil	VR0589	Potato	-	*0.01
Cyromazine	VR0075	Root and tuber vegetables	T1	-
DDT		Vegetables	E1	-
Diazinon		Vegetables	0.7	-
Deltamethrin	VR0589	Potato	-	*0.01
Dicofol		Vegetables {except cucumber; gherkin; tomato}	5	-
Difenoconazole	VR0075	Root and tuber vegetables	0.5	-
	VR0589	Potato	-	Po4
Dimethenamid-P	VR0589	Potato	-	*0.01
Dimethipin	VR0589	Potato	-	*0.05
Dimethoate	VR0589	Potato	0.1	-
Dimethomorph	VR0589	Potato	*0.02	0.05
Diquat	VR0589	Potato	0.2	0.1
Dithiocarbamates	VR0589	Potato	1	0.2
EPTC		Vegetables	*0.04	-
Endosulfan	VR0589	Potato	-	*0.05
Ethoprophos	VR0589	Potato	-	0.05
Famoxadone	VR0589	Potato	-	*0.02
Fenamidone	VR0589	Potato	-	*0.02
Fenpyroximate	VR0589	Potato	-	*0.05
Fipronil	VR0589	Potato	*0.01	0.02
Flonicamid	VR0589	Potato	0.3	0.01

Chemical	Codex	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Fluazaindolizine	VR0075	Root and tuber vegetables	0.3	-
	VR2071	Tuberous & corm vegetables	-	0.2
	VR2070	Root vegetables {except carrot}	-	0.04
Fluazifop-p-butyl	VR0589	Potato	0.05	0.6
Fluazinam	VR0589	Potato	T0.1	-
Flubendiamide	VR0589	Potato	*0.02	-
Fludioxonil	VR0589	Potato	0.03	Po5
Fluensulfone	VR0075	Root and tuber vegetables	2	3
	VR0589	Potato	-	0.8
Flumioxazin	VR0589	Potato	-	*0.02
Fluopicolide	VR0589	Potato	0.05	
Fluopyram	VR0075	Root and tuber vegetables {except sweet potato}	0.2	-
	VR0589	Potato	-	0.15
Flupyradifurone	VR0589	Potato	0.07	0.05
Flutolanil	VR0589	Potato	0.05	-
Fluxapyroxad	VR0589	Potato	0.1	0.07
Folpet	VR0589	Potato	-	0.1
Glufosinate-ammonium	VR0589	Potato	-	0.1
Glyphosate	VR0075	Root and tuber vegetables	*0.1	-
Heptachlor		Vegetables {except carrot; soya bean (dry); tomato}	E0.05	-
Hexythiazox	VR0589	Potato	T*0.02	-
Imazalil	VR0589	Potato	5	9
Imidacloprid	VR0075	Root and tuber vegetables	-	0.5
	VR0589	Potato	0.3	-
Indoxacarb	VR0589	Potato		0.02
Inorganic Bromide		Vegetables {except peppers, sweet [capsicum]}	20	-
Inpyrfluxam	VR0589	Potato	0.05	-
Iprodione	VR0589	Potato	*0.05	*0.05
Isocycloseram	VR0589	Potato	-	*0.01
Lindane		Vegetables	E2	-
Linuron		Vegetables {except carrot, celeriac; celery; leek; parsnip}	*0.05	-
Lufenuron	VR0589	Potato	-	*0.01
Maleic Hydrazide	VR0589	Potato	50	50
Mandipropamid	VR0589	Potato	-	0.1
Mefentrifluconazole	VR0589	Potato	*0.01	
	VR2071	Tuberous & corm vegetables	-	0.05
	VR2070	Root vegetables {except sugar beet}	-	0.5
Metaflumizone	VR0589	Potato	-	*0.02
Metalaxyl		Vegetables {except asparagus; beetroot; bulb vegetables [alliums]; fruiting vegetables, cucurbits; leafy vegetables; peppers; podded pea (young pods) [snow and sugar snap peas]; tomato}	T0.1	-

Chemical	Codex	Description	APVMA MRL mg/kg	Codex MRL mg/kg
	VR0589	Potato	-	0.02
Metaldehyde		Vegetables	1	-
Metconazole	VR2071	Tuberous & corm vegetables	-	*0.04
Methamidophos	VR0589	Potato	0.25	0.05
Methiocarb	VR0589	Potato	*0.06	*0.05
Methomyl	VR0075	Root and tuber vegetables	1	-
	VR0589	Potato	-	*0.02
Methyl Bromide		Vegetables {except cucumber; peppers}	T*0.05	-
Metobromuron	VR0589	Potato	0.03	-
Metolachlor	VR0589	Potato	*0.01	-
Metribuzin	VR0589	Potato	*0.05	-
Myclobutanil	VR0075	Root and tuber vegetables	-	0.06
Novaluron	VR0589	Potato	-	*0.01
Omethoate	VR0589	Potato	0.05	-
Oxamyl	VR0589	Potato	-	*0.01
Oxathiapiprolin	VR2071	Tuberous & corm vegetables	-	0.04
Oxydemeton-methyl	VR0589	Potato	-	*0.01
Paclobutrazol	VR0589	Potato	T*0.01	
Parathion-methyl	VR0589	Potato	-	*0.05
Paraquat	VR0075	Root and tuber vegetables	-	0.05
	VR0589	Potato	0.2	-
Pencycuron	VR0589	Potato	0.05	-
Pendimethalin	VR0075	Root and tuber vegetables {except carrot}	*0.05	-
Penflufen	VR0589	Potato	*0.01	
Penthiopyrad	VR0589	Potato	0.1	0.05
Permethrin	VR0589	Potato	0.05	*0.05
Phorate	VR0589	Potato	0.5	0.3
Phosmet	VR0589	Potato	-	*0.05
Phosphine	VR0075	Root and tuber vegetables	T*0.01	-
Phosphorous acid	VR0589	Potato	T700	-
Piperonyl Butoxide	VR0075	Root and tuber vegetables {except carrot}	-	0.5
		Vegetables	8	-
Pirimicarb	VR0075	Root and tuber vegetables	-	0.05
		Vegetables {except celeriac; celery; leafy vegetables; onion, welsh; pulses; shallot; spring onion; sweet corn (corn-on-the-cob)}	1	-
Procymidone	VR0589	Potato	0.2	-
Prometryn		Vegetables	*0.1	-
Propamocarb	VR0589	Potato	0.05	0.3
Propargite		Vegetables	3	-
	VR0589	Potato	-	0.03
Propineb	VR0589	Potato	0.3	-
Prosulfocarb	VR0589	Potato	*0.01	-
Prothioconazole	VR0589	Potato	-	*0.02
Pydiflumetofen	VR0589	Potato	*0.01	-
	VR2071	Tuberous & corm vegetables	-	0.1
	VR2070	Root vegetables	-	0.3

Chemical	Codex	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Pymetrozine	VR0589	Potato	*0.02	-
Pyraclostrobin	VR0589	Potato	*0.02	-
	VR2071	Tuberous & corm vegetables	-	*0.02
	VR2070	Root vegetables {except sugar beet}	-	0.5
Pyrethrins	VR0075	Root and tuber vegetables	-	*0.05
		Vegetables	1	-
Pyrimethanil	VR0589	Potato	*0.01	*0.05
Quintozene	VR0589	Potato	0.2	-
Quizalofop-ethyl	VR0589	Potato	*0.01	-
Quizalofop-P-tefuryl	VR0589	Potato	*0.01	-
Sedaxane	VR0589	Potato	0.1	0.02
Sethoxydim	VR0075	Root and tuber vegetables	1	-
Spinetoram	VR0075	Root and tuber vegetables	0.02	-
	VR0589	Potato	-	*0.01
Spinosad	VR0075	Root and tuber vegetables	0.02	-
	VR0589	Potato	-	*0.01
Spiromesifen	VR0589	Potato	-	*0.02
Spiropidion	VR0589	Potato	-	1.5
Spirotetramat	VR0589	Potato	5	0.8
Sulfoxaflor	VR0075	Root and tuber vegetables {except carrot}	-	0.03
	VR0589	Potato	0.01	-
Tetraniliprole	VR2071	Tuberous & corm vegetables	*0.01	0.02
Thiabendazole	VR0589	Potato	5	Po15
Thiacloprid	VR0589	Potato	-	*0.02
Thiamethoxam	VR0075	Root and tuber vegetables	T0.7	0.3
Thiodocarb	VR0589	Potato	0.1	-
Tolclofos-methyl	VR0589	Potato	0.1	0.3
Tolfenpyrad	VR0589	Potato		*0.01
Trichlorfon		Vegetables {except beetroot; brussels sprouts; cape gooseberry; cauliflower; celery; egg plant, thai; leafy vegetables; pepino; peppers; pulses (dry); sweet corn (corn-on-the-cob)}	0.1	-
Trifloxystrobin	VR0589	Potato	-	*0.02
Trifluralin		Vegetables {except carrot; parsnip; fennel, bulb; galangal, greater}	0.05	-
Zoxamide	VR0589	Potato	-	0.02

NOTE: MRLs are constantly under review and subject to change. Check for current MRLs and do not rely on the values stated above.

* Indicates that an MRL is at the Limit of Quantitation (LOQ)
T =Temporary MRL
E = The MRL is based on extraneous residues

Sources: APVMA MRLs: Agricultural and Veterinary Chemicals Code (MRL Standard) Instrument 2023. Compilation 12. Prepared 29 November 2025. CODEX MRLs: CODEX Alimentarius International Food tandards database (February 2026), http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/en/

Appendix 7: Potato Agrichemical Regulatory Risk Assessment

Potato
Agrichemical Regulatory Risk Assessment

November 2025

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 require 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 to ensure compliance, as 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. Consequently, 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 **potato crops** in Australia, as well as assisting with any current initiatives aimed at identifying and addressing pest management deficiencies.

R0	Use no longer approved
R1	Short-term: Critical concern over retaining access < 1 year
R2	Medium-term: Maintaining access of significant concern <2-5 years
R3	Long-term: Potential issues associated with use – Monitoring required < 5 years
R4	No current risk/concerns

INSECTICIDES/MITICIDES/NEMATICIDES - Insect and other pests

Blue text = new APVMA approved uses

Active Constituent	MoA Group	Pest	Risks and Comments
ABAMECTIN	6	Red tomato spider mite Vegetable leafminer Permit PER90864 for the control of Potato Moth Permit PER84249 for the control of Tomato Potato Psyllid	Australia: APVMA nominated for reconsideration and spray drift assessment. Permit PER90864 Expiry date: 31/05/2030 Permit PER84249 Expiry date: 30/09/2026 Codex MRL: 0.005 mg/Kg Canada: Re-evaluation finalised. Label amendments to mitigate risks to human health and environment (July, 2025)
ACEPHATE	1B	Potato moth (Leafminer)	Australia: APVMA nominated for reconsideration after 2029. EU: Not approved Canada: In re-evaluation USA: Under Registration Review (scheduled)
ACETAMIPRID	4A	Green peach aphid	Australia: APVMA: Currently under review. Proposed regulatory decisions expected between December 2025 to October 2026. Canada: In re-evaluation USA: Under Registration Review (scheduled)
AFIDOPYROPEN	9D	Cabbage aphid Cotton aphid Currant lettuce aphid Green peach aphid Silverleaf (Poinsettia) whitefly	Australia: No current concerns. EU: Not approved

Active Constituent	MoA Group	Pest	Risks and Comments
ALPHA-CYPERMETHRIN	3A	Permit PER12612 for the control of Garden weevil	Australia: APVMA nominated for reconsideration after 2029. Permit PER12612 Expiry date: 30/04/2026 EU: Not approved
Bacillus thuringiensis	11A	Armyworm Cotton bollworm Native budworm Cabbage moth Cabbage white butterfly Loopers Lightbrown apple moth Vine moth	Australia: No current concerns. USA: Under Registration Review (scheduled)
CARBARYL	1A	Armyworms/cutworms European earwig Green vegetable bug *Helicoverpa* Leaf eating ladybirds Potato moth (Leafminer) Rutherglen bug Wingless grasshopper	Australia: No current concerns. EU: Not approved Canada: In re-evaluation USA: Under Registration Review (scheduled)
CHLORANTRANILIPROLE	28	*Helicoverpa* Potato moth (Leafminer)	Australia: No current concerns. Canada: In re-evaluation
CHLORPYRIFOS	1B	--	Australia: The chemical review was completed in September 2024. Most uses in horticultural crops were removed. After 30 September 2025, products with previously approved labels must not be supplied. The only remaining approved use is in Brassica crops as specified on current labels. EU: Not approved Canada: Cancelled USA: Agricultural uses cancelled. Very few registrations as Restricted Use Pesticide.

Active Constituent	MoA Group	Pest	Risks and Comments
CYANTRANILIPROLE	28	Silverleaf whitefly Cotton bollworm Potato tuber moth Permit PER84805 Tomato Potato Psyllid	Australia: No current concerns. Permit PER84805 Expiry date: 31/08/2025 Codex MRL: 0.05 mg/Kg
DIAZINON	1B	--	Australia: APVMA made a Final Decision on 2024. After 10 September 2025, crop uses are no longer approved. Codex: All MRLs deleted EU: Not approved Canada: Cancelled USA: Under Registration Review (scheduled)
DIMETHOATE	1B	Aphids Jassids Leafhoppers Mites Redlegged earth mite Thrips Wingless grasshopper	Australia: APVMA reconsideration. Prioritised to be commenced by 2029. EU: Not approved Canada: In re-evaluation USA: Under Registration Review (scheduled)
FIPRONIL	2B	Mole crickets Whitefringed weevil Wireworms	Australia: APVMA: Currently under review. Proposed Regulatory decision expected by April 2026. Codex MRL: 0.02 mg/Kg EU: Not approved USA: Under Registration Review (scheduled)
FLONICAMID	29	Cotton aphid Green peach aphid Potato aphid	Australia: No current concerns. Codex MRL: 0.01 mg/Kg
FLUAZAINDOLIZINE	N-UN	Root Knot Nematode (*Meloidogyne* spp.)	Australia: No current concerns. EU: Pending

Active Constituent	MoA Group	Pest	Risks and Comments
FLUBENDIAMIDE	28	Cabbage white butterflies Cluster caterpillar Diamondback (Cabbage) moth *Helicoverpa* Potato moth (Leafminer)	Australia: No current concerns. EU: Not approved UK: Withdrawn (2024).
FLUENSULFONE	5	Root-knot nematode	Australia: No current concerns. Codex MRL: 0.8 mg/Kg
FLUPYRADIFURONE	4D	Green peach aphid Silverleaf whitefly	Australia: No current concerns. Codex MRL: 0.05 mg/Kg
GAMMA-CYHALOTHRIN	--	Vegetable leafhopper	Australia: No current concerns. EU: Not approved UK: Withdrawn (2025).
HELICOVERPA ARMIGERA NPV	31	Helicoverpa	Australia: No current concerns.
IMIDACLOPRID	4A	Green peach aphid Silverleaf (Poinsettia) whitefly Silverleaf whiteflies	Australia: APVMA: Currently under review. Proposed regulatory decisions expected between December 2025 to October2026. EU: Not approved Canada: Very few uses allowed in greenhouses and seed treatment. USA: Under Registration Review (scheduled)
LAMBDA-CYHALOTHRIN	3A	Vegetable leafhopper Permit PER84249 for the control of Tomato Potato Psyllid	Australia: No current concerns. Permit PER84249 Expiry date: 30/09/2026 EU: Approved, candidate for substitution.

Active Constituent	MoA Group	Pest	Risks and Comments
METHOMYL	1A	Potato moth Potato looper Permit PER82428 for the control of: Helicoverpa spp. Cucumber moth Cluster caterpillar Loopers Webworm Rutherglen bug Thrips including WFT Permit PER84249 for the control of Tomato Potato Psyllid	Australia: APVMA reconsideration. Prioritised to be commenced by 2026. Permit PER82428 Expiry date: 31/01/2029 Permit PER84249 Expiry date: 30/09/2026 Codex MRL: 0.02 mg/Kg EU: Not approved Canada: In re-evaluation USA: Under Registration Review (scheduled)
PERMETHRIN	3A	Potato moth	Australia: APVMA nominated for reconsideration after 2029. Codex MRL: 0.05 mg/Kg EU: Not approved
PHORATE	1B	Aphids Jassids Thrips Two-spotted (Red spider) mite Wireworms	Australia: APVMA reconsideration. Prioritised to be commenced by 2026. Codex MRL: 0.3 mg/Kg EU: Not approved Canada: In re-evaluation USA: Under Registration Review (scheduled)
PIRIMICARB	1A	Potato aphid	Australia: No current concerns. EU: Approved, candidate for substitution. Canada: Cancelled

Active Constituent	MoA Group	Pest	Risks and Comments
PYMETROZINE	9B	Green peach aphid	Australia: APVMA nominated for reconsideration and spray drift assessment. EU: Not approved Canada: Cancelled
SPINETORAM	5	Caterpillars Helicoverpa Lightbrown apple moth Loopers Potato moth (Leafminer)	Australia: No current concerns. Codex MRL: 0.01 mg/Kg EU: Not approved UK: Withdrawn (2024). Canada: In re-evaluation
SPINOSAD	5	Helicoverpa Lightbrown apple moth Loopers Potato moth (Leafminer) Permit PER89870 for the control of Fall Armyworm	Australia: No current concerns. Permit PER89870 Expiry date: 31/10/2030 Codex MRL: 0.01 mg/Kg Canada: In re-evaluation
SPIROTETRAMAT	23	Silverleaf (Poinsettia) whitefly	Australia: No current concerns. Codex MRL: 0.8 mg/Kg EU: Not approved Canada: In re-evaluation
SPODOPTERA FRUGIPERDA NPV		Permits PER90820 and PER91477 for the control of Fall Armyworm	Australia: No current concerns. Permit PER90820 Expiry date: 31/03/2027 Permit PER91477 Expiry date: 31/03/2027
SULFOXAFLOR	4C	Green peach aphid Tomato/ potato psyllid	Australia: No current concerns.
THIODICARB	1A	Helicoverpa	Australia: APVMA Nominated for targeted spray drift reconsideration EU: Not approved USA: Under Registration Review (scheduled)

Active Constituent	MoA Group	Pest	Risks and Comments
TRICHLORFON	1B	Cutworms	Australia: APVMA nominated for reconsideration after 2029. EU: Not approved Canada: Cancelled USA: Under Registration Review (scheduled)

FUNGICIDES – Disease Control

Active Constituent	MoA Group	Pest	Risks and Comments
AMISULBROM	21	Pink rot Powdery scab	Australia: No current concerns.
AZOXYSTROBIN	11	Late (Irish) blight Rhizoctonia canker (Black scurf) Silver scurf Target spot (Early blight)	Australia: No current concerns. Codex MRL: 7 mg/Kg Canada: In re-evaluation
AZOXYSTROBIN | DIFENOCONAZOLE	11 + 3	Late (Irish) blight	AZOXYSTROBIN Australia: No current concerns. Codex MRL: 7 mg/Kg Canada: In re-evaluation DIFENOCONAZOLE Australia: APVMA nominated for reconsideration after 2029. Codex MRL: 4 mg/Kg EU: Approved, candidate for substitution. Canada: In re-evaluation
Bacillus amyloliquefaciens STRAIN QST 713	BM02	Rhizoctonia canker (Black scurf)	Australia: No current concerns.

Active Constituent	MoA Group	Pest	Risks and Comments
BOSCALID	7	Sclerotinia rot Target spot (Early blight)	Australia: No current concerns. Canada: In re-evaluation
CHLORIDAZON	3	EARLY BLIGHT (TARGET SPOT)	Australia: No current concerns.
CHLOROTHALONIL	M5	Late (Irish) blight Target spot (Early blight)	Australia: APVMA reconsideration. Prioritised to be commenced by 2028. EU: Not approved Canada: In re-evaluation USA: Under Registration Review (scheduled)
COPPER	M1	Late (Irish) blight Target spot (Early blight) Pink rot	Australia: No current concerns.
CYAZOFAMID	21	Late (Irish) blight	Australia: No current concerns. Codex MRL: 0.01 mg/Kg Canada: In re-evaluation
CYPROCONAZOLE	3	Late (Irish) blight Target spot (Early blight)	Australia: APVMA nominated for reconsideration after 2029. EU: Not approved UK: Withdrawn (2024).
DIFENOCONAZOLE	3	Target spot (Early blight)	Australia: APVMA nominated for reconsideration after 2029. Codex MRL: 4 mg/Kg EU: Approved, candidate for substitution. Canada: In re-evaluation
DIMETHOMORPH	40	Late (Irish) blight Target spot (Early blight) Late (Irish) blight	Australia: No current concerns. Codex MRL: 0.05 mg/Kg EU: Not approved Canada: In re-evaluation

Active Constituent	MoA Group	Pest	Risks and Comments
FLUAZINAM	29	Late (Irish) blight Sclerotinia rot Anthracnose (Black Dot) PER96705 for the control of powdery scab	Australia: No current concerns. Permit PER96705 Expiry date: 31/10/2027 Canada: In re-evaluation
FLUAZINAM | AZOXYSTROBIN	29 + 11	Early Blight Late Blight	FLUAZINAM Australia: No current concerns. Canada: In re-evaluation AZOXYSTROBIN Australia: No current concerns. Codex MRL: 7 mg/Kg Canada: In re-evaluation
FLUDIOXONIL	12	Anthracnose (Black Dot) Common scab Dry rot Rhizoctonia canker (Black scurf) Silver scurf	Australia: No current concerns. Codex MRL: 5 mg/Kg EU: Approved, candidate for substitution.
FLUDIOXONIL | SEDAXANE	12 + 7	Anthracnose (Black Dot) Common scab Dry rot Gangrene Rhizoctonia canker (Black scurf) Silver scurf	FLUDIOXONIL Australia: No current concerns. Codex MRL: 5 mg/Kg EU: Approved, candidate for substitution. SEDAXANE Australia: No current concerns.
FLUTOLANIL	7	Rhizoctonia canker (Black scurf)	Australia: No current concerns.

Active Constituent	MoA Group	Pest	Risks and Comments
HYDROGEN PEROXIDE | PEROXYACETIC ACID	M	Powdery scab Rhizoctonia canker (Black scurf)	Australia: No current concerns.
IMAZALIL	3	Dry rot Gangrene Silver scurf	Australia: No current concerns. Codex MRL: 9 mg/Kg
INPYRFLUXAM	7	Rhizoctonia solani – soil borne	Australia: No current concerns.
IODINE	M	Bactericide Fungi	Australia: No current concerns. Canada: Cancelled
IPRODIONE	2	Hypocotyl rot Rhizoctonia canker (Black scurf) Sclerotinia rot Target spot (Early blight)	Australia: No current concerns. Codex MRL: 0.05 mg/Kg EU: Not approved USA: Under Registration Review (scheduled)
MANCOZEB	M3	Fusarium seed piece decay Late (Irish) blight Seed piece breakdown Target spot (Early blight)	Australia: APVMA reconsideration. Prioritised to be commenced by 2027. EU: Not approved UK: Withdrawn (2024). USA: Under Registration Review (scheduled)
MANCOZEB | AZOXYSTROBIN	M3 + 11	Early blight	MANCOZEB Australia: APVMA reconsideration. Prioritised to be commenced by 2027. AZOXYSTROBIN Australia: No current concerns. Codex MRL: 7 mg/Kg Canada: In re-evaluation

Active Constituent	MoA Group	Pest	Risks and Comments
MANCOZEB | COPPER	M3 + M1	Early Blight Late Blight	MANCOZEB Australia: APVMA reconsideration. Prioritised to be commenced by 2027. COPPER Australia: No current concerns.
MANCOZEB | METALAXYL	M3 + 4	Early Blight Late Blight	MANCOZEB Australia: APVMA reconsideration. Prioritised to be commenced by 2027. METALAXYL Australia: No current concerns. Codex MRL: 0.02 mg/Kg EU: Approved, candidate for substitution. Canada: In re-evaluation
METALAXYL	4	Pink rot	Australia: No current concerns. Codex MRL: 0.02 mg/Kg EU: Approved, candidate for substitution. Canada: In re-evaluation
METIRAM	M3	Early Blight Late Blight	Australia: APVMA reconsideration. Prioritised to be commenced by 2027. EU: Not approved Canada: Only approved for foliar applications in potato crops.
METIRAM | PYRACLOSTROBIN	M3 +11	Early Blight Late Blight	METIRAM Australia: APVMA reconsideration. Prioritised to be commenced by 2027.EU: Not approved Canada: Only approved for foliar applications in potato crops. PYRACLOSTROBIN Australia: No current concerns. Canada: In re-evaluation

Active Constituent	MoA Group	Pest	Risks and Comments
PENCYCURON	20	Rhizoctonia canker (Black scurf)	Australia: No current concerns. EU: Not approved UK: Withdrawn (2021).
PENFLUFEN	7	Rhizoctonia canker (Black scurf)	Australia: No current concerns. EU: Not approved UK: Withdrawn (2025).
PENTHIOPYRAD	7	Alternaria leaf spots Powdery mildew	Australia: No current concerns. Codex MRL: 0.05 mg/Kg
PHOSPHOROUS (PHOSPHONIC) ACID	P07 (33)	Permit PER94059 for the control of Pink rot	Australia: No current concerns. Permit PER94059 Expiry date: 30/11/2028
PROCYMIDONE	2	Sclerotinia rot Target spot (Early blight)	Australia: No current concerns. EU: Not approved
PROPAMOCARB | FLUOPICOLIDE	M3 + 43	Late blight	PROPAMOCARB HYDROCHLORIDE Australia: No current concerns. FLUOPICOLIDE Australia: No current concerns EU: Approved, candidate for substitution.
PROPINEB	M3	Late (Irish) blight Target spot (Early blight)	Australia: APVMA reconsideration. Prioritised to be commenced by 2027. EU: Not approved
PYDIFLUMETOFEN	7	Early blight	Australia: No current concerns. EU: Pending Canada: In re-evaluation

Active Constituent	MoA Group	Pest	Risks and Comments
PYDIFLUMETOFEN | DIFENOCONAZOLE	7 + 3	Powdery mildew Target spot (Early blight)	PYDIFLUMETOFEN Australia: No current concerns. EU: Pending Canada: In re-evaluation DIFENOCONAZOLE Australia: APVMA nominated for reconsideration after 2029. Codex MRL: 4 mg/Kg EU: Approved, candidate for substitution. Canada: In re-evaluation
PYDIFLUMETOFEN | FLUDIOXONIL	7 + 12	Botrytis Sclerotinia	PYDIFLUMETOFEN Australia: No current concerns. EU: Pending Canada: In re-evaluation FLUDIOXONIL Australia: No current concerns. Codex MRL: 5 mg/Kg EU: Approved, candidate for substitution.
PYRIMETHANIL	9	Early blight	Australia: No current concerns. Codex MRL: 0.05 mg/Kg Canada: In re-evaluation
QUINTOZENE	14	Rhizoctonia canker (Black scurf)	Australia: No current concerns. EU: Not approved
THIABENDAZOLE	1	Dry rot Gangrene Silver scurf	Australia: No current concerns. Codex MRL: 15 mg/Kg
TOLCLOFOS-METHYL	14	Rhizoctonia canker (Black scurf)	Australia: No current concerns. Codex MRL: 0.3 mg/Kg

HERBICIDES – Weed Control

Active Constituent	MoA Group	Risks and Comments
2,2-DPA	0	Australia: No current concerns.
2,4-D	4	Australia: No current concerns. Codex MRL: 0.2 mg/Kg Canada: In re-evaluation USA: Under Registration Review (scheduled)
AMITROLE	34	Australia: APVMA nominated for reconsideration after 2029. Canada: Cancelled
ASULAM	18	Australia: No current concerns EU: Not approved Canada: Cancelled
ATRAZINE	5	Australia: APVMA Nominated for targeted spray drift reconsideration EU: Not approved Canada: In re-evaluation USA: Under Registration Review (scheduled)
CARFENTRAZONE-ETHYL	14	Australia: No current concerns. Canada: In re-evaluation
CLETHODIM	1	Australia: No current concerns. Codex MRL: 0.5 mg/Kg
CLOMAZONE	13	Australia: No current concerns. Canada: In re-evaluation
CYANAZINE	5	Australia: APVMA nominated for reconsideration after 2029. EU: Not approved Canada: Cancelled

Active Constituent	MoA Group	Risks and Comments
DICAMBA	4	Australia: APVMA nominated for reconsideration and spray drift assessment. Canada: In re-evaluation USA: Under Registration Review (scheduled)
DIQUAT	22	Australia: APVMA: Currently under review. Publication of the final regulatory decision **is now expected in Mid 2026**. Codex MRL: 0.1 mg/Kg EU: Not approved USA: No agricultural uses allowed. Aquatic herbicide.
ETHYL DIPROPYLTHIOCARBAMATE	15	Australia: No current concerns. Canada: In re-evaluation
FLUAZIFOP-P PRESENT AS THE BUTYL ESTER	1	Australia: APVMA Nominated for targeted spray drift reconsideration Canada: Cancelled
LINURON	5	Australia: No current concerns. EU: Not approved
METOBROMURON	5	Australia: No current concerns. Canada: Cancelled
METOLACHLOR	15	Australia: No current concerns. EU: Not approved Canada: Cancelled
METRIBUZIN	5	Australia: No current concerns. EU: Not approved Canada: In re-evaluation USA: Under Registration Review (scheduled)

Active Constituent	MoA Group	Risks and Comments
PARAQUAT	22	Australia: APVMA: Currently under review.Publication of the final regulatory decision **is now expected in Mid 2026**. Candidate chemical recommended to be listed to Rotterdam Convention. EU: Not approved Canada: Cancelled USA: Restricted use
PENDIMETHALIN	3	Australia: No current concerns. Permit PER93692 Expiry date: 31/05/2027 EU: Approved, candidate for substitution. Canada: In re-evaluation USA: Under Registration Review (scheduled)
PROMETRYN	5	Australia: No current concerns. EU: Not approved
QUIZALOFOP-P-ETHYL	1	Australia: No current concerns.
SETHOXYDIM	1	Australia: No current concerns. EU: Not approved Canada: Phase-Out
S-METOLACHLOR	15	Australia: No current concerns. EU: Not approved

FUMIGANTS – Mixed Function

Active Constituent	Use	Risks and Comments
CHLOROPICRIN + 1,3-DICHLOROPROPENE	Control of soil borne diseases, plant parasitic Nematodes, Symphylans and Wireworms	CHLOROPICRIN Australia: No current concerns. EU: Not approved USA: Restricted use 1,3-DICHLOROPROPENE Australia: No current concerns. EU: Pending Canada: Cancelled
DAZOMET	Control of bacterial spot (*Xanthomona*s spp.) (suppression only). Soil insects and nematodes	Australia: No current concerns. USA: Under Registration Review (scheduled)
ETHANEDINITRILE	Soil borne pathogens, nematodes and weeds	Australia: No current concerns.
METHAM PRESENT AS SODIUM SALT	Germinating weeds and soil-borne fungus diseases	Australia: No current concerns.

PLANT REGULATORS AND OTHERS – Plant regulators, post-harvest treatments, rodenticides and others.

Active Constituent	Use	Risks and Comments
CHLORPROPHAM	Prevention of Sprouting	Australia: No current concerns. Codex MRL: 30 mg/Kg EU: Not approved Canada: In re-evaluation
MALEIC HYDRAZIDE	Inhibits sprouting of tubers	Australia: No current concerns. Codex MRL: 50 mg/Kg Canada: In re-evaluation

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