Celery

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 celery 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 celery industry with sound pesticide usage for the future that the industry can pursue for registration with the manufacturer, or minor-use permits with the Australian Pesticide and Veterinary Medicines Authority (APVMA).

1.1 Diseases

The high priority diseases are:

Common name	Scientific name
Early Blight / Cercospora Leaf Spot	*Cercospora apii*
Sclerotinia Rot	*Sclerotinia sclerotiorum*, *Sclerotinia minor*
Septoria Spot / Late Blight	*Septoria apiicola*
Leaf Curl / Celery Anthracnose	*Colletotrichum acutatum, C. orbiculare*

1.2 Insects and Mites

The high priority insects and mites are:

Common name	Scientific name
Melon Aphid	*Aphis gossypii*
Green Peach Aphid	*Myzus persicae*
Cotton Bollworm	*Helicoverpa armigera*
Native Budworm	*Helicoverpa punctigera*
Vegetable Leafminer	*Liriomyza sativae*
Serpentine Leafminer	*Liriomyza huidobrensis*
American Serpentine Leafminer	*Liriomyza trifolii*

1.3 Weeds

The high priority weeds are:

Common Name	Scientific Name
Marshmallow	*Malva parviflora*
Winter Grass	*Poa annua*
Groundsel	*Senecio vulgaris*
Oxalis / Sour Sob	*Oxalis pes-caprae*

2. The Australian Celery Industry

The Australian Celery industry is a major horticultural industry.

Celery is grown in most states of Australia, with the majority of production occurring in Victoria. Production occurs year-round with most celery destined for the fresh local market, with a small but growing fresh export market.

Production for the year ending June 2025[1] was 59,371 tonnes with a value of $63.2m. A total of 54,303 tonnes (91%) went to the fresh domestic market, with 4,191 tonnes (7%) to fresh export and 877 tonnes (1%) into processing. Production volume and value was stable for the period 2021-2025.

Fresh Celery Seasonality by State

State	24/25 Tonnes	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Victoria	34,251												
Queensland	14,565												
Western Australia	8,562												
Tasmania	1,059												
South Australia	424												
New South Wales	509												
Availability Legend			High			Medium			Low			None	

Australia is a net exporter of celery. For the year ending June 2025, Australia exported 4,191 tonnes of fresh celery. Of this export volume, 41.4% was destined for Malaysia, followed by 38.3% to Singapore, UAE (8.4%), Hong Kong (2.3%) and Thailand (2.2%).

[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 celery 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 celery industry regarding pesticide access, Hort Innovation undertook a review of the pesticide requirements via a Strategic Agrichemical Review Process (SARP) in 2021. 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 celery 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 celery 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 celery 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 celery 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 celery as a major crop. The crop fits within the APVMA crop group VS0078: Stalk and stem vegetables, within the subgroup VS2080: Stems & Petioles. Access to minor use permits can be achieved as long as 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 celery 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 Celery Strategic Agrichemical Review Process (SARP), which was last updated in 2021, 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	**Celery 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 Celery 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 ranked 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 celery
Appendix 2. Products available for control of insects and mites in celery
Appendix 3. Products available for weed control in celery
Appendix 4. Current permits for use in celery
Appendix 5. Celery Maximum Residue Limits (MRLs)
Appendix 6. Celery Agrichemical Regulatory Risk Assessment

4. Diseases, Pests and Weeds of Celery

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 celery

4.1.1 Disease priorities

Common name	Scientific name
High	
Early Blight / Cercospora Leaf Spot	*Cercospora apii*
Sclerotinia Rot	*Sclerotinia sclerotiorum*, *Sclerotinia minor*
Septoria Spot / Late Blight	*Septoria apiicola*
Leaf Curl / Celery Anthracnose	*Colletotrichum acutatum, C. orbiculare*
Moderate	
Bacterial Soft Rot	*Erwinia* spp.
Celery Mosaic Virus (Cemv)	Potyvirus
Low	
Bacterial Blight	*Pseudomonas syringae pv. apii*
Botrytis Rot	*Botrytis cinerea*
Fusarium Root Rot	*Fusarium oxysporum*

The high priority diseases in celery are Early Blight / Cercospora Leaf Spot, Sclerotinia Rot, Septoria Spot / Late Blight and Leaf Curl / Celery Anthracnose. Available and potential products for controlling diseases of celery are listed in Section 4.1.2.

Foliar diseases should be managed using a planned disease management strategy incorporating cultural measures as well as strategic use of fungicides.

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
Early Blight / Cercospora Leaf Spot (*Cercospora apii*) **Priority: High**							
Early Blight / Cercospora Leaf Spot is rated as a high priority. Infection is favoured by warm, humid conditions and is exacerbated by close plant spacings and overhead irrigation. It is seed borne but can spread in the field by wind, rain splash and on people and machinery. Control measures should include the use of disease-free planting material, plant populations, irrigation management and general farm hygiene in conjunction with a planned fungicide program.							
Chlorothalonil (Bravo)	M5	Protectant	1	A	NSW & WA	Registered in celery for control of **Cercospora Early Blight** (*Cercospora apii*). Apply as a foliar spray when conditions favour disease. Use a retreatment interval of 10-14 days. Maximum number of treatments per crop not specified.	R2
Difenoconazole	3	Protectant	7	A	ALL	Registered in celery for control of **Cercospora Leaf Spot** and Septoria Spot. Apply as a foliar spray, commencing before symptoms occur. Use a retreatment interval of 10-14 days. Maximum of 4 applications per crop, with no more than 2 consecutive applications.	R3
Hydrogen Peroxide + Peroxyacetic Acid (Peratec Plus)	M	Protectant	1	A	ALL	Registered in celery for control of **Cercospora Leaf Spot** (*Cercospora* spp.) Apply as 2 consecutive foliar sprays using a retreatment interval of 5-7 days. Maximum of 4 applications per crop.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Metiram (Polyram)	M3	Protectant	2	A	ALL (excl. SA)	Registered in celery for control of **Early Blight** (*Cercospora apii*) and Late Blight (*Septoria apiicola*). Apply as a foliar spray, commencing when disease symptoms first appear. Use a retreatment interval of 7 days. Maximum number of applications per crop not specified.	R2
Propiconazole (Tilt) PER14479	3	Protectant	14 NG	A	ALL (excl. VIC)	Permitted in celery for control of Septoria Spot (*Septoria apiicola*) and **Early Blight** (*Cercospora apii*). Apply as a foliar spray at first sign of disease. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop.	R3
Pydiflumetofen + Difenoconazole (Miravis Duo) Syngenta	7+3	Protectant	1	A	ALL	Registered in celery for control of **Cercospora Leaf Spot** (*Cercospora apii*) and Septoria Leaf Spot (*Septoria apiicola*). Apply as a foliar spray, commencing 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
Trifloxystrobin (Flint) PER14494	11	Protectant & Curative	3	A	ALL (excl. VIC)	Permitted in celery (field grown) for control of **Cercospora Leaf Spot** (*Cercospora apii*) and Septoria Leaf Spot (*Septoria apiicola*). Apply as a foliar spray at first signs of conditions that favour disease development. Use a minimum retreatment interval of 10 days. Maximum of 3 applications per crop, and do not use consecutive applications.	R4
Zineb	M3	Protectant	7	A	ALL (excl. QLD)	Registered in celery for control of **Cercospora Leaf Spot** / **Early Blight**. Apply as a foliar spray when plant first emerges from seedbed. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R2
Copper	M1	Protectant	1	P-A	ALL	Registered in celery for control of Leaf Spot (*Septoria apiicola*) and Bacterial Soft Rot (*Erwinia carotovora pv carotovora*). Registered for control of ***Cercospora* spp.** in bananas, fig and celery.	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.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Bacillus amyloliquefaciens strain MBI 600 (Serifel) BASF	BM 02	Biological	NR	P		Registered for control of *Botrytis* in grapes and strawberries. US registration for control of **Cercospora** in leafy vegetables, sugar beet and tobacco.	R4
Fluopyram + Tebuconazole (Luna Experience) Bayer	7+3	Protectant & Curative		P		Registered for control of various diseases in various fruit and vegetable crops, tree nuts and pyrethrum. US registration for control of a variety of diseases including Powdery Mildew, Alternaria Leaf Spot, Gummy Stem Blight, Septoria, *Botrytis, Cladosporium,* ***Cercospora****, Sclerotinia* and Anthracnose in almond, Brassica leafy vegetables, legume vegetables, melons and various fruit crops.	R4
Fluopyram + Trifloxystrobin (Luna Sensation) Bayer	7+11	Protectant & Curative		P		Registered for control of various leaf diseases in almonds, pome fruit, stone fruit and tropical and sub-tropical fruit (inedible peel). US registration for control of ***Cercospora*** in peanuts and sugarbeet.	R4
Mefentrifluconazole (Belanty) BASF	3	Protectant & Curative		P		Registered for control of Black Spot in apples and Powdery Mildew in grapes. US registration for control of ***Cercospora*** in corn, legume vegetables, peanuts, sorghum, millet, soybean and sugar beet.	R4
Pydiflumetofen + Fludioxonil (Miravis Prime) Syngenta	7+12	Protectant & Curative		P		Registered for control of Botrytis in berries and grapes, and Botrytis and Sclerotinia in leafy vegetables and root vegetables. US registration for control of **Cercospora** in brassicas, carrots, cucurbits, stalk vegetables and root and tuber vegetables.	R3
Sclerotinia Rot (*Sclerotinia sclerotiorum*, *Sclerotinia minor*) **Priority: High**							
Sclerotinia Rot is rated as a high priority. It is a soil-borne disease that is favoured by cool, moist conditions. Crop rotation is an important strategy to help break the disease cycle, which should be used in conjunction with a planned fungicide program to manage the disease.							
Boscalid (Filan) PER11127	7	Protectant	14	A	ALL (excl. VIC)	Permitted in celery for control of **Sclerotinia**. Apply as a foliar spray prior to disease development. 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
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
Iprodione (Rovral)	2	Protectant	1	A	ALL	Registered in celery for control of **Sclerotinia Rot** / Pink Rot (*Sclerotinia sclerotiorum*). Apply as a foliar spray, commencing 1-2 weeks post-transplanting. Use a retreatment interval of 14-21 days. Maximum of 5 applications per crop.	R4
Metham Sodium	-	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 QST 713 (Serenade Prime Soil Ameliorant and Biofungicide) Bayer	BM 02	Biological	NR	P-A	ALL	Registered in vegetables for application to soil to improve bioavailability of soil resources to horticultural crops.	R4
Aureobasidium pullulans (Botector) Nufarm	BM 02	Biological	NR	P		Registered for suppression of **Sclerotinia** in fruiting vegetables.	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.	R4

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 various diseases in various fruit and vegetable crops, tree nuts and pyrethrum. 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** in green beans and lettuce and control of Blossom Blight and Brown Rot in stone fruit.	R4
Pydiflumetofen + Fludioxonil (Miravis Prime) Syngenta	7+12	Protectant & Curative		P		Registered for control of **Sclerotinia** in lettuce, leafy vegetables and root vegetables.	R3
Septoria Spot / Late Blight (*Septoria apiicola*) **Priority: High**							
Septoria Spot / Late Blight is rated as a high priority. It is a foliar disease that attacks the leaves and stalks of celery as they mature. Infection is favoured by cool, wet conditions. Septoria can be managed by using an integrated disease program including the use of disease-free planting material, farm hygiene, irrigation management, crop rotation and strategic use of fungicides. The use of forecasting models such as TomCast can assist in timing fungicide applications effectively and efficiently.							
Chlorothalonil (Bravo)	M5	Protectant	1	A	ALL	Registered in celery for control of **Septoria Leaf Spot** (*Septoria apiicola*). Apply as a foliar spray when conditions favour disease. Use a retreatment interval of 7-14 days. Maximum number of treatments per crop not specified.	R2

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Copper	M1	Protectant	1	A	ALL	Registered in celery for control of **Leaf Spot** (*Septoria apiicola*) and Bacterial Soft Rot (*Erwinia carotovora pv carotovora*). Apply as a foliar spray, commencing when conditions favour infection. Use a retreatment interval of 7-14 days. Maximum number of applications per crop not specified.	R4
Difenoconazole	3	Protectant	7	A	ALL	Registered in celery for control of Cercospora Leaf Spot and **Septoria Spot**. Apply as a foliar spray, commencing before symptoms occur. Use a retreatment interval of 10-14 days. Maximum of 4 applications per crop, with no more than 2 consecutive applications.	R3
Mancozeb	M3	Protectant	7	A	ALL	Registered in celery for control of **Septoria Leaf Spot**. Apply as a foliar spray at first sign of disease. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R2
Metalaxyl-M + Mancozeb (Ridomil Gold MZ) Syngenta PER13673	4+M3	Protectant	14	A	ALL (excl. VIC)	Permitted in celery for control of **Septoria Leaf Spot** / **Late Blight** (*Septoria apiicola*). Apply as a foliar spray when conditions favour disease development. Use a retreatment interval of 7-10 days. Maximum of 2 applications per crop.	R2
Metiram (Polyram)	M3	Protectant	2	A	ALL (excl. SA)	Registered in celery for control of Early Blight (*Cercospora apii*) and **Late Blight** (*Septoria apiicola*). Apply as a foliar spray, commencing when disease symptoms first appear. Use a retreatment interval of 7 days. Maximum number of applications per crop not specified.	R2
Propiconazole (Tilt) PER14479	3	Protectant	14 NG	A	ALL (excl. VIC)	Permitted in celery for control of **Septoria Spot** (*Septoria apiicola*) and Early Blight (*Cercospora apii*). Apply as a foliar spray at first sign of disease. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop.	R3
Propineb	M3	Protectant	7	A	VIC, TAS & WA	Registered in celery for control of **Septoria Leaf Spot**. Apply as a foliar spray when conditions favour disease. 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
Pydiflumetofen + Difenoconazole (Miravis Duo) Syngenta	7+3	Protectant	1	A	ALL	Registered in celery for control of Cercospora Leaf Spot (*Cercospora apii*) and **Septoria Leaf Spot** (*Septoria apiicola*). Apply as a foliar spray, commencing 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
Thiram	M3	Protectant	7	A	ALL (excl. NSW)	Registered in celery for control of **Septoria Leaf Spot** (*Septoria* spp.), Anthracnose (*Colletotrichum* / *Microdochium* spp.) and Botrytis (*Botrytis cinerea*). Apply as a foliar spray when disease first appears. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R2
Trifloxystrobin (Flint) PER14494	11	Protectant & Curative	3	A	ALL (excl. VIC)	Permitted in celery (field grown) for control of Cercospora Leaf Spot (*Cercospora apii*) and **Septoria Leaf Spot** (*Septoria apiicola*). Apply as a foliar spray at first signs of conditions that favour disease development. Use a minimum retreatment interval of 10 days. Maximum of 3 applications per crop, and do not use consecutive applications.	R4
Zineb	M3	Protectant	7	A	QLD	Registered in celery for control of **Septoria Leaf Spot**. Apply as a foliar spray when plant first emerges from seedbed. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R2
Ziram	M3	Protectant	7	A	ALL	Registered in celery for control of **Septoria Leaf Spot** (*Septoria apiicola*). Apply as a foliar spray when conditions favour disease. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R2
Boscalid + Pyraclostrobin (Pristine) BASF	7+11	Protectant / Curative		P		Registered for control of Blackspot, Powdery Mildew and Alternaria in apple and Blackspot in pear. US registration for control of ***Septoria* spp.** in berries and celery.	R4
Cyprodinil + Fludioxonil (Switch) Syngenta	9+12	Protectant / Curative		P		Registered for control of various fungal diseases in alliums, apples, capsicum, cucumber, cut flowers, garlic, grapes, green beans, leafy vegetables, lettuce, nursery stock, ornamentals, pyrethrum and strawberries. US registration for control of **Septoria** in celery.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Fluopyram + Tebuconazole (Luna Experience) Bayer	7+3	Protectant & Curative		P		Registered for control of various diseases in various fruit and vegetable crops, tree nuts and pyrethrum. US registration for control of **Septoria** in dry and succulent beans and pistachio.	R4
Fluxapyroxad + Pyraclostrobin (Merivon) BASF	7+11	Protectant & Curative		P		Registered for control of various leaf diseases in almonds, cherries and macadamia. US registration for control of **Septoria** in leafy vegetables.	-
Pydiflumetofen + Fludioxonil (Miravis Prime) Syngenta	7+12	Protectant & Curative		P		Registered for control of various diseases in cherries, grapes, berries, leafy vegetables, lettuce and potato. US registration for control of **Septoria** in cucurbits, fruiting vegetables, grape and small fruit vine climbing (except fuzzy kiwifruit), leaf petiole vegetables, leafy greens, potato, specific tree nuts and tuberous & corm vegetables.	R3
Leaf Curl / Celery Anthracnose (*Colletotrichum acutatum, Colletotrichum orbiculare*) **Priority: High**							
Leaf Curl / Celery Anthracnose is rated as a high priority, particularly in VIC and QLD. It is favoured by warm, humid conditions and severe infections can lead to significant crop losses. Control options should include the use of disease-free planting material, avoid overhead irrigation if possible, general farm hygiene practices and crop rotation. Fungicide controls can be effective, but options are currently limited.							
Thiram	M3	Protectant	7	A	ALL (excl. NSW)	Registered in celery for control of Septoria Leaf Spot (*Septoria* spp.), **Anthracnose** (*Colletotrichum* / *Microdochium* spp.) and Botrytis (*Botrytis cinerea*). Apply as a foliar spray when disease first appears. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R2
Copper	M1	Protectant	1	P-A	ALL	Registered in celery for control of Leaf Spot (*Septoria apiicola*) and Bacterial Soft Rot (*Erwinia carotovora pv carotovora*). Registered for control of **Anthracnose** in avocadoes.	R4
Aureobasidium pullulans Strain DSM 14940 & DSM 14941 (Botector) Nufarm	-	Biological / Protectant	NR	P		Registered for control of Botrytis and other diseases in grapes, berries and fruiting vegetables, including the suppression of **Anthracnose Fruit Rot** 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 for control of **Anthracnose** in avocado, other tropical fruit crops (excluding banana) and mango.	R4
Benzovindiflupyr + Propiconazole (Elatus) Syngenta	7+3	Protectant & Curative		P		Registered for control of various disease in wheat and barley. US registration for **Anthracnose** in sweet corn.	R3
BLAD (Problad Plus)	BM 01	Biological	NR	P		Registered for suppression of Brown Rot in stone fruit. US registration for control of **Anthracnose** in grapes and strawberries.	R4
Fluopyram + Tebuconazole (Luna Experience) Bayer	7+3	Protectant & Curative		P		Registered for control of various diseases in various fruit and vegetable crops, tree nuts and pyrethrum. US registration for control of **Anthracnose** in almonds, cucurbits and tree nuts.	R3
Fluopyram + Trifloxystrobin (Luna Sensation) Bayer	7+11	Protectant & Curative		P		Registered for control of **Anthracnose** in avocado, mango and other tropical & sub-tropical fruits, inedible peel (excluding banana, papaya, passionfruit, pineapples) and Japanese persimmons.	R4
Fluxapyroxad + Pyraclostrobin (Merivon) BASF	7+11	Protectant & Curative		P		Registered for control of various leaf diseases in almonds, cherries and macadamia. Registered for control of **Anthracnose** in almonds. US registration for control of Leaf Spot, Powdery Mildew, **Anthracnose** and Grey Mould in strawberries. US registration for control of Grey Mould, Powdery Mildew and **Anthracnose** in strawberries.	R4
Isofetamid (Kenja) ISK / AgNova	7	Protectant & Curative	NR	P	ALL	Registered for control of Botrytis Grey Mould in strawberries. US registration for control of Grey Mould, Powdery Mildew and **Anthracnose** in low-growing berries.	R4
Mefentrifluconazole (Belanty) BASF	3	Protectant & Curative		P		Registered for control of various diseases in grapes, apples, almonds, macadamias, cucurbits and fruiting vegetables. US registration for control of **Anthracnose** in fruiting vegetables and tree nuts.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Pydiflumetofen + Fludioxonil (Miravis Prime) Syngenta	7+12	Protectant / Curative	1 NG	P	ALL	Registered for control of various diseases in grapes, berries, leafy vegetables, lettuce and potato. US registration for control of **Anthracnose** in grape and small fruit vine climbing (except fuzzy kiwifruit), lemon & lime, low-growing berries, specific tree nuts, almonds and bushberries.	R3
Bacterial Soft Rot (*Erwinia* spp.) **Priority: Moderate**							
Bacterial Soft Rot is rated as a moderate priority. It is favoured by warm, humid conditions and waterlogged soil. The pathogen generally enters through wounds caused by insects or mechanical damage. Bacterial Soft Rot can manifest in the field or during transit and storage. Control options include avoiding waterlogged fields through raised beds and irrigation management, avoiding mechanical damage during harvest, using cool storage for harvested produce and using good sanitation during harvest and post-harvest processing.							
Copper	M1	Protectant	1	A	ALL	Registered in celery for control of Leaf Spot (*Septoria apiicola*) and **Bacterial Soft Rot** (*Erwinia carotovora pv carotovora*). Apply as a foliar spray, commencing when conditions favour infection. Use a retreatment interval of 7-14 days. Maximum number of applications per crop not specified.	R4
Acibenzolar-S-Methyl (Actigard Plant Activator) Syngenta	P01	Protectant		P		US registration for control of various bacterial diseases in brassica leafy vegetables, citrus, cucurbits, low growing berries, bulb onion, pepper, 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

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Celery Mosaic Virus (Cemv) (Potyvirus) **Priority: Moderate**							
Celery Mosaic Virus is rated as a moderate priority. It is a sporadic disease that is spread by aphids and thrips. Spread is enhanced by sequential plantings of celery without a cropping break. Disease-free planting material should be used in conjunction with general farm hygiene, cropping breaks of at least 3 months and control of vectors.							
No chemical control options available							
Bacterial Blight (*Pseudomonas syringae pv. apii*) **Priority: Low**							
Bacterial Blight is rated as a low priority. It is favoured by warm moist conditions and management centres around cultural measures, such as using disease-free planting material, crop rotation, irrigation practices and general farm hygiene.							
Copper	M1	Protectant	1	P-A	ALL	Registered in celery for control of Leaf Spot (*Septoria apiicola*) and Bacterial Soft Rot (*Erwinia carotovora pv carotovora*).	R4
Acibenzolar-S-Methyl (Actigard Plant Activator) Syngenta	P01	Protectant		P		US registration for control of various bacterial diseases in brassica leafy vegetables, citrus, cucurbits, low growing berries, bulb onion, pepper, 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

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Botrytis Rot (*Botrytis cinerea*) **Priority: Low**							
Botrytis Rot is rated as a low priority. Infection is favoured by cool, moist conditions and while it generally occurs in crop, often the symptoms don't appear until after harvest. In crop strategies include reducing humidity through plant spacing and irrigation management and a well-planned fungicide program. Plant damage during harvest should be avoided and post-harvest storage should be in cool, low humidity environments.							
Thiram	M3	Protectant	7	A	ALL (excl. NSW)	Registered in celery for control of Septoria Leaf Spot (*Septoria* spp.), Anthracnose (*Colletotrichum* / *Microdochium* spp.) and **Botrytis** (*Botrytis cinerea*). Apply as a foliar spray when disease first appears. Use a retreatment interval of 7-10 days. Maximum number of applications per crop not specified.	R2
Copper	M1	Protectant	1	P-A	ALL	Registered in celery for control of Leaf Spot (*Septoria apiicola*) and Bacterial Soft Rot (*Erwinia carotovora pv carotovora*). Registered for control of **Botrytis** in beans, faba beans and strawberries.	R4
Hydrogen Peroxide + Peroxyacetic Acid (Peratec Plus)	M	Protectant	1	P-A	ALL	Registered in celery for control of Cercospora Leaf Spot (*Cercospora* spp.) Registered for control of **Botrytis** in grapes.	R4
Aureobasidium pullulans (Botector) Nufarm	BM 02	Biological	NR	P		Registered for control of **Botrytis** in berries, fruiting vegetables, cucurbits and grapes.	R4
Bacillus amyloliquefaciens (Serenade Opti) Bayer	BM 02	Biological	NR	P		Registered for control of **Botrytis** in grapes and strawberries.	R4
Bacillus amyloliquefaciens strain MBI 600 (Serifel) BASF	BM 02	Biological	NR	P		Registered for control of **Botrytis** in grapes and strawberries.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
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 ***Botrytis*** in fruiting vegetables, grapes, strawberries and ornamentals.	R4
Cyprodinil + Fludioxonil (Switch) Syngenta	9+12	Protectant		P		Registered for control of **Botrytis** in capsicum, cut flowers, grapes, onions, alliums, strawberries, lettuce, nursery stock and ornamentals.	R3
Eugenol + Geraniol + Thymol (Novellus) Eden Research PLC	1	Protectant & Curative		P		Registered for control of **Botrytis** in grapes.	R4
Fenhexamid (Teldor) Bayer	17	Protectant		P		Registered for control of **Botrytis** in grapevines, strawberries, peppers, cucumber, lettuce, rubus, snow peas, sugar snap peas and tree nursery stock.	R4
Fenpyrazamine (Prolectus) Sumitomo	17	Protectant & Curative		P		Registered for **Botrytis** control in grapes. US registration for control of **Botrytis** in almonds, berries, lettuce, pistachios and ornamentals.	R4
Florylpicoxamid (Verpixo Adavelt) Corteva	21	Protectant		P		Registered for control of **Botrytis** in capsicum, chilli, eggplant, okra, tomato, lettuce, strawberry and grapevines.	R4
Fluopyram + Tebuconazole (Luna Experience) Bayer	7+3	Protectant & Curative		P		Registered for control of **Botrytis** in citrus, grapevines, strawberries, macadamias and pistachios.	R4
Fluopyram + Trifloxystrobin (Luna Sensation) Bayer	7+11	Protectant & Curative		P		Registered for control of **Botrytis** in strawberries and cane berries.	R4
Ipflufenoquin (Migiwa Kinoprol) AgNova	52	Protectant		P		Registered for control of **Botrytis** in strawberries.	R4

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Isofetamid (Kenja) AgNova	7	Protectant		P		Registered for control of **Botrytis** in low growing berries, cane berries and bush berries.	R4
Penthiopyrad (Fontelis) Corteva	7	Protectant		P		Registered for control of **Botrytis** in strawberry, onions, shallots, spring onion, cucurbits, fruiting vegetables and leafy vegetables.	R4
Polyoxin D Zinc Salt (Intervene) Nufarm	19	Protectant		P		Registered for control of **Botrytis** in almonds, berries and grapes.	R4
Pydiflumetofen + Fludioxonil (Miravis Prime) Syngenta	7+12	Protectant & Curative		P		Registered for control of **Botrytis** in berries, grapes, lettuce and potato.	R4
Pyrimethanil (Scala) Bayer	9	Protectant & Curative		P		Registered for control of **Botrytis** in grapevines, ornamentals and strawberries.	R4
Fusarium Root Rot (*Fusarium oxysporum*) **Priority: Low**							
Fusarium Root Rot is rated as a low priority. It is a soil-borne disease with spores that can survive for many years without a host. Control measures include the use of resistant varieties, long crop rotations, soil management to improve drainage and general farm hygiene to avoid spreading the disease from infected fields.							
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
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
Bacillus amyloliquefaciens strain QST713 (Serenade Prime) Bayer	BM02	Biological	NR	P-A	ALL	Registered in vegetables for application to soil to improve bioavailability of soil resources to horticultural crops.	R4
Acibenzolar-S-Methyl (Bion Plant Activator) Syngenta	P01	Protectant		P		Registered as a seed treatment for suppression of **Fusarium Wilt** in cotton.	R4
Fludioxonil (Maxim 100 FS) Syngenta	12	Protectant		P		Registered as a seed treatment for control of **Fusarium** Dry Rot (*Fusarium* spp.) in potatoes.	R4
Fludioxonil + Sedaxane (Vibrance Premium) Syngenta	12+7	Protectant		P		Registered as a seed treatment for control of **Fusarium** Dry Rot (*Fusarium* spp.) in potatoes.	R4
Imazalil (Magnate 750 WSP)	3	Protectant & Curative		P		Registered for control of Dry Rot (*Fusarium* spp.) in potato tubers.	R4
Thiabendazole (Tecto)	1	Protectant		P		Registered for control of Dry Rot (*Fusarium* spp.) in potatoes.	R4

4.2 Insect and mite pests of celery

4.2.1 Insect and mite pest priorities

Common name	Scientific name
High	
Melon Aphid	*Aphis gossypii*
Green Peach Aphid	*Myzus persicae*
Cotton Bollworm	*Helicoverpa armigera*
Native Budworm	*Helicoverpa punctigera*
Vegetable Leafminer	*Liriomyza sativae*
Serpentine Leafminer	*Liriomyza huidobrensis*
American Serpentine Leafminer	*Liriomyza trifolii*
Moderate	
Light Brown Apple Moth	*Epiphyas postvittana*
Plague Thrips	*Thrips imaginis*
Western Flower Thrips	*Frankliniella occidentalis*
Cutworms	*Agrotis* spp.
Rutherglen Bug	*Nysius vinitor*
Root-Knot Nematodes	*Meloidogyne* spp.
Snails & Slugs	Gastropoda
Low	
Green Vegetable Bug	*Nezara viridula*
Common Armyworm	*Mythimna convecta*
Southern Armyworm	*Persectania ewingii*
Cluster Caterpillar	*Spodoptera litura*
Loopers	*Chrysodeixis* spp.
Greenhouse Whitefly	*Trialeurodes* spp.
Jassids / Leafhoppers	Cicadellidae
Bryobia Mite	*Bryobia rubrioculus*
European Red Mite	*Panonychus ulmi*
Rust Mite	Eriophydae
Tomato Russet Mite	*Aculops lycopersici*

Common name	Scientific name
Two-Spotted Mite	*Tetranychus urticae*
Spotted Vegetable Weevil	*Desiantha diversipes*
Vegetable Weevil	*Listroderes difficilis*
African Black Beetle	*Heteronychus arator*
Black Field Cricket	*Teleogryllus commodus*
Mole Cricket	*Gryllotalpa australis*
Wireworm	Elateridae
False Wireworm	*Gonocephalum* spp.
Red Legged Earth Mite	*Halotydeus destructor*
Fall Armyworm	*Spodoptera frugiperda*

The high priority insect pests of celery are Melon Aphid, Green Peach Aphid, Cotton Bollworm, Native Budworm, Vegetable Leafminer, Serpentine Leafminer and American Serpentine Leafminer. Available and potential products for these pests are listed in Section 4.2.2.

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.

Resistance management strategies[6] are available on the Croplife Australia website.

[6] 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
Melon Aphid (*Aphis gossypii*) **Green Peach Aphid** (*Myzus persicae*) **Priority: High**								
Melon Aphid and Green Peach Aphid are rated as a high priority. Aphids suck on sap, causing loss of vigour, and in some cases yellowing, stunting or distortion of plant parts. Honeydew (unused sap) secreted by the insects can cause sooty mould to develop on leaves. They are an important vector of Celery Mosaic Virus.								
Afidopyropen (Versys) BASF	9D	Ingestion	1	A	ALL	Registered in celery for control of **Green Peach Aphid** (*Myzus persicae*), Cabbage Aphid (*Brevicoryne brassicae*), Currant Lettuce Aphid (*Nasonovia ribis-nigri*), Cotton Aphid / **Melon Aphid** (*Aphis gossypii*) and Corn Aphid (*Rhopalosiphum maydis*), and suppression of Silverleaf Whitefly (*Bemisia tabaci*). Apply as a foliar spray, commencing when local thresholds are reached. Use a retreatment interval of 14 days. Maximum of 4 applications per crop, with no more than 2 consecutive applications.	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
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 cover spray and re-apply as necessary every 2-3 weeks.	VH Bee:H	R4
Imidacloprid PER12489	4A	Contact & Ingestion	3 NG	A	ALL (excl. VIC)	Permitted in celery for control of **Aphids** and suppression of Plague Thrips (*Thrips imaginis*) and Onion Thrips (*Thrips tabaci*). Apply as a foliar spray at the first sign of pest infestation. Retreatment interval not specified. Maximum of 2 applications per crop. Do not apply consecutive applications.	M Bee:M	R2
Malathion	1B	Contact	3	A	ALL	Registered in celery for control of **Aphids**, Cabbage Moth (*Plutella xylostella*), Cabbage White Butterfly (*Pieris rapae*), Green Vegetable Bug (*Nezara viridula*), Jassids / Leafhoppers, Rutherglen Bug (*Nysius vinitor*) and Thrips. Apply as a foliar spray when pest first appears. Retreatment interval not specified. Maximum of 4 applications per crop.	H Bee:H	R4
Orange Oil (Prev-Am) Oro Agri	-	Contact	NR	A	ALL	Registered in celery for suppression of Onion Thrips (*Thrips tabaci*), Western Flower Thrips (*Frankliniella occidentalis*), **Green Peach Aphid** (*Myzus persicae*), Cabbage Aphid (*Brevicoryne brassicae*) and Serpentine Leafminer (*Liriomyza brassicae*). Apply as a foliar spray starting early in the pest infestation and use at least 2 consecutive applications at a retreatment interval of 5-12 days. Maximum number of applications not specified.	VL Bee:VL	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Petroleum Oil PER12221	-	Contact	1	A	ALL (excl. VIC)	Permitted in celery for control of **Aphids**, Green Mirid, Green Vegetable Bug, Grey Cluster Bug, Leafhoppers, Mites, Rutherglen Bug and Thrips. Apply as a foliar spray when pest numbers are at a low level. Retreatment interval and maximum number of applications per crop not specified.	VL Bee:L	R4
Pirimicarb (Aphidex)	1A	Contact & Ingestion	2	A	ALL	Registered in celery for control of Aphids, including **Green Peach Aphid** and **Cotton Aphid**. Apply as a foliar spray when local thresholds are reached. Use a retreatment interval of 10-14 days. Maximum of 2 non-consecutive sprays 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
Pymetrozine (Chess) Syngenta	9B	Contact & Ingestion	14	A	ALL	Registered in celery for control of **Aphids**. Apply as a foliar spray at early stages of infestation. Use a minimum retreatment interval of 14 days. Maximum of 2 applications per crop.	L Bee:VL	R3
Spirotetramat (Movento) Bayer	23	Ingestion	3	A	ALL	Registered in celery for control of **Green Peach Aphid** (*Myzus persicae*), **Cotton Aphid** (*Aphis gossypii*), Western Flower Thrips (*Frankliniella occidentalis*), Tomato Thrips (*Frankliniella schultzei*) and Plague Thrips (*Thrips imaginis*). Apply as a foliar spray, commencing when local thresholds are reached. Use a minimum retreatment interval of 7 days. Maximum of 2 applications per crop.	M Bee:VL	R4
Cyantraniliprole (Benevia) FMC PER93850	28	Ingestion	1 NG	P-A	ALL (excl. VIC)	Permitted in celery for control of Liriomyza Leafminers, including Vegetable Leafminer (*Liriomyza sativae*), Pea Leafminer / Serpentine Leafminer (*Liriomyza huidobrensis*) and American Serpentine Leafminer (*Liriomyza trifolii*). Registered for suppression of **Green Peach Aphid** in fruiting vegetables and potatoes, control of **Melon Aphid** in fruiting vegetables, and suppression of **Green Peach Aphid**, **Melon Aphid** and Strawberry Aphid in strawberries.	M Bee:VH	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Dimpropyridaz (Efficon) BASF	UN	Ingestion		P		Registered for control of **Melon Aphid** in cucurbits, and **Green Peach Aphid** in brassica vegetables, leafy vegetables and brassica leafy vegetables.	M Bee:L	R4
Flonicamid (Mainman) UPL	9C	Ingestion		P		Registered for control of **Green Peach Aphid** in canola, cucurbits and potato.	M Bee:L	R4
Flupyradifurone (Sivanto Prime) Bayer	4D	Contact & Ingestion		P		Registered for control of **Cotton Aphid** and **Green Peach Aphid** in cucurbits, eggplant, peppers and tomatoes, and control of **Green Peach Aphid** in green beans, potatoes and sweet potatoes.	L Bee:VL	R4
Sulfoxaflor (Transform) Corteva	4C	Contact & Ingestion		P		Registered for control of **Green Peach Aphid** and **Melon Aphid** in cucurbits, and **Green Peach Aphid** in fruiting vegetables, sweet corn, leafy vegetables, root & tuber vegetables, brassica vegetables, cane berries, strawberries, stone fruit and tree nuts.	M Bee:VH	R4
Cotton Bollworm (*Helicoverpa armigera*) **Native Budworm** (*Helicoverpa punctigera*) **Priority: High**								
Cotton Bollworm and Native Budworm are rated as a high 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 the stems and growing terminals.								
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	3	A	ALL	Registered in celery for control of **Cotton Bollworm** (*Helicoverpa armigera*) and **Native Budworm** (*Helicoverpa punctigera*). Apply as a foliar spray, targeting eggs and newly hatched larvae before they become entrenched. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop, with no more than 2 consecutive applications.	L Bee:VL	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Emamectin (Proclaim Opti) Syngenta PER88066	6	Ingestion	3	A	ALL (excl. VIC)	Permitted in celery (field only) for control of ***Helicoverpa* spp.**, Light Brown Apple Moth (*Epiphyas postvittana*) and Cluster Caterpillar (*Spodoptera litura*). Apply as a foliar spray at first sign of infestation. Use a minimum retreatment interval of 7 days. Maximum of 4 applications per crop.	M Bee:H	R3
Esfenvalerate (Sumi-Alpha Flex)	3A	Contact	1	A	ALL	Registered in celery for control of **Heliothis** (*Helicoverpa* spp.) Apply as a foliar spray at first sign of infestation. Retreatment interval and maximum number of applications per crop not specified.	VH Bee:H	R4
Flubendiamide (Belt) Bayer	28	Ingestion	1	A	ALL	Registered in celery for control of **Heliothis** (*Helicoverpa* spp.) Apply as a foliar spray, commencing when local thresholds are reached. 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
Indoxacarb (Avatar Evo) FMC	22A	Ingestion	7 NG	A	ALL	Registered in celery for control of Beet Web Worm (*Spolodea recurvalis*), **Cotton Bollworm** (*Helicoverpa armigera*), **Native Budworm** (*Helicoverpa punctigera*), Light Brown Apple Moth (*Epiphyas postvittana*) and Vegetable Weevil (*Listroderes obliquus*). Apply as a foliar spray targeting eggs and newly hatched larvae before they become entrenched. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop.	L 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	3	A	ALL	Permitted for in celery 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 monitoring identifies early stages of a pest incursion. Use a 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 celery for control of **Cotton Bollworm** (*Helicoverpa armigera*) and **Native Budworm** (*Helicoverpa punctigera*). Apply as a foliar spray targeting early-stage larvae. Use a retreatment interval of 2-3 days. Maximum number of applications per crop not specified.	VL Bee:L	R4
Spinetoram (Success Neo) Corteva	5	Ingestion	1	A	ALL	Registered in stalk & stem vegetables, including celery, for control of ***Helicoverpa* spp.** Apply as a foliar spray when monitoring indicates pest thresholds have been reached. Use a retreatment interval of 7-14 days. Maximum of 4 applications per season.	M Bee:H	R4
Spinosad (Entrust Organic) Corteva	5	Ingestion	1	A	ALL	Registered in stalk & stem vegetables, including celery, for control of **Heliothis**. Apply as a foliar spray when monitoring indicates pest thresholds have been reached. Use a retreatment interval of 7-14 days. Maximum of 4 applications per season.	L Bee:L	R4
Isocycloseram (Simodis) Syngenta PER94854	30	Ingestion	3	P-A	ALL (excl. VIC)	Permitted in celery for control of Serpentine Leafminer (*Liriomyza huidobrensis*). Registered for suppression of **Heliothis** in brassica vegetables, brassica leafy vegetables, cucurbits and fruiting vegetables.	H Bee:H	R4
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
Methoxyfenozide (Prodigy) Corteva	18	Insect Growth Regulator		P		Registered for control of **Native Budworm** in tomatoes, peppers, eggplant and okra.	VL Bee:VL	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Vegetable Leafminer (*Liriomyza sativae*) **Serpentine Leafminer** (*Liriomyza huidobrensis*) **American Serpentine Leafminer** (*Liriomyza trifolii*) **Priority: High**								
Liriomyza Leafminers are rated as a high priority. They are recent arrivals to Australia which can cause widespread damage to a range of crops. The larvae tunnel through leaf tissue, leading to reduced photosynthesis, leaf death or premature leaf death. They can cause significant economic loss through reduced yields when uncontrolled. Control measures are limited. Interstate quarantine conditions are in place that require in-field chemical controls for entry of host produce into certain states.								
Cyantraniliprole (Benevia) FMC PER93850	28	Ingestion	1 NG	A	ALL (excl. VIC)	Permitted in celery for control of Liriomyza Leafminers, including **Vegetable Leafminer** (*Liriomyza sativae*), Pea Leafminer / **Serpentine Leafminer** (*Liriomyza huidobrensis*) and **American Serpentine Leafminer** (*Liriomyza trifolii*). Apply as a foliar spray when pest first appears. Use a minimum retreatment interval of 7 days. Maximum of 2 applications per crop.	M Bee:VH	R4
Cyromazine (Diptex 150WP) PER81867	17	IGR	7 NG	A	ALL	Permitted in stalk & stem vegetables for control of Liriomyza Leafminers including **Vegetable Leafminer** (*Liriomyza sativae*) and **Serpentine Leafminer** (*Liriomyza huidobrensis*). Apply as a foliar spray when pest first appears. Use a minimum retreatment interval of 7 days. Maximum of 6 applications per crop.	-	R4
Isocycloseram (Simodis) Syngenta PER94854	30	Ingestion	3	A	ALL (excl. VIC)	Permitted in celery for control of **Serpentine Leafminer** (*Liriomyza huidobrensis*). Apply as a foliar spray when signs of pest are detected. Use a minimum retreatment interval of 7 days. Maximum of 2 applications per crop.	H Bee:H	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Orange Oil (Prev-Am) Oro Agri	-	Contact	NR	A	ALL	Registered for suppression of Onion Thrips (*Thrips tabaci*), Western Flower Thrips (*Frankliniella occidentalis*), Green Peach Aphid (*Myzus persicae*), Cabbage Aphid (*Brevicoryne brassicae*) and **Serpentine Leafminer** (*Liriomyza brassicae*). Apply as a foliar spray starting early in the pest infestation and use at least 2 consecutive applications at a retreatment interval of 5-12 days. Maximum number of applications not specified.	VL Bee:VL	R4
Spinetoram (Success Neo) Corteva PER94451	5	Ingestion	1	A	ALL (excl. VIC)	Permitted in stalk & stem vegetables including celery 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
Spinosad (Entrust Organic) Corteva PER94331	5	Ingestion	1 G:14	A	ALL (excl. VIC)	Permitted in stalk & stem vegetables including celery 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 4 applications per crop, with no more than 2 consecutive applications.	L Bee:L	R4
Chlorantraniliprole (Coragen) FMC	28	Ingestion	3	P-A	ALL	Registered in celery for control of (*Helicoverpa punctigera*). Permitted for control of **Leafminers** (*Liriomyza* spp.) in spinach and silverbeet.	L Bee:VL	R4
Emamectin (Proclaim Opti) Syngenta PER88066	6	Ingestion	3	P-A	ALL (excl. VIC)	Permitted in celery (field only) for control of *Helicoverpa* spp., Light Brown Apple Moth (*Epiphyas postvittana*) and Cluster Caterpillar (*Spodoptera litura*). Permitted for control of ***Liriomyza*** species, including **Vegetable Leafminer** (*Liriomyza sativae*) in brassica vegetables.	M Bee:H	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Light Brown Apple Moth (*Epiphyas postvittana*) **Priority: Moderate**								
Light Brown Apple Moth is rated as a moderate priority. The larvae cause damage to leaves and stems. An integrated pest management program should be used, incorporating biological and cultural controls to support a planned insecticide strategy.								
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
Emamectin (Proclaim Opti) Syngenta PER88066	6	Ingestion	3	A	ALL (excl. VIC)	Permitted in celery (field only) for control of *Helicoverpa* spp., **Light Brown Apple Moth** (*Epiphyas postvittana*) and Cluster Caterpillar (*Spodoptera litura*). Apply as a foliar spray at first sign of infestation. Use a minimum retreatment interval of 7 days. Maximum of 4 applications per crop.	M 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
Indoxacarb (Avatar Evo) FMC	22A	Ingestion	7 NG	A	ALL	Registered in celery for control of Beet Web Worm (*Spolodea recurvalis*), Cotton Bollworm (*Helicoverpa armigera*), Native Budworm (*Helicoverpa punctigera*), **Light Brown Apple Moth** (*Epiphyas postvittana*) and Vegetable Weevil (*Listroderes obliquus*). Apply as a foliar spray targeting eggs and newly hatched larvae before they become entrenched. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop.	L Bee:H	R4
Chlorantraniliprole (Coragen) FMC	28	Ingestion	3	P-A	ALL	Registered in celery for control of (*Helicoverpa punctigera*). Registered for control of **Light Brown Apple Moth** (*Epiphyas postvittana*) in pome fruit, stone fruit 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) Syngenta PER94854	30	Ingestion	3	P-A	ALL (excl. VIC)	Permitted in celery for control of Serpentine Leafminer (*Liriomyza huidobrensis*). Registered for control of Diamondback Moth and Cabbage White Butterfly in brassica vegetables and brassica leafy vegetables, and for suppression of Heliothis in brassica vegetables, brassica leafy vegetables, cucurbits and fruiting vegetables.	H Bee:H	R4
Spinetoram (Success Neo) Corteva	5	Ingestion	1	P-A	ALL	Registered in stalk & stem vegetables, including celery, for control of *Helicoverpa* spp. Registered for control of **Light Brown Apple Moth** (*Epiphyas postvittana*) in culinary herbs, root & tuber vegetables, avocado, berryfruit, citrus and kiwifruit.	M Bee:H	R4
Spinosad (Entrust Organic) Corteva	5	Ingestion	1	P-A	ALL	Registered in stalk & stem vegetables, including celery, for control of Heliothis. Registered for control of **Light Brown Apple Moth** (*Epiphyas postvittana*) in culinary herbs, root & tuber vegetables, avocado, berryfruit, citrus, grapes, kiwifruit, pome fruit and stone fruit.	L Bee:L	R4
Acetamiprid + Novaluron (Cormoran) Adama	4A+15	Contact & Ingestion		P		Registered for control of **Light Brown Apple Moth** (*Epiphyas postvittana*) in apples, pears and stone fruit.	M Bee:M	R2
Methoxyfenozide (Prodigy) Corteva	18	Ingestion		P		Registered for control of **Light Brown Apple Moth** in apples, pears, blueberry, citrus, grapevines and kiwifruit.	VL Bee:VL	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Plague Thrips (*Thrips imaginis*) **Western Flower Thrips** (*Frankliniella occidentalis*) **Priority: Moderate**								
Plague Thrips and Western Flower Thrips are rated as a moderate priority. Thrips are a rasping pest that are difficult to control with insecticides. Cultural measures including field hygiene should be used, as well as avoiding disruptive insecticide early season to preserve beneficials. Thrips can vector Celery Mosaic Virus.								
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
Fipronil (Regent) PER83203	2B	Contact	7	A	ALL (excl. VIC)	Permitted in celery for control of **Western Flower Thrips** (*Frankliniella occidentalis*). Apply as a foliar spray commencing when incursion is detected. Use a minimum retreatment interval of 3 days. Maximum of 3 applications per crop.	M Bee:H	R2
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 PER12489	4A	Contact & Ingestion	3 NG	A	ALL (excl. VIC)	Permitted in celery for control of Aphids and suppression of **Plague Thrips** (*Thrips imaginis*) and Onion Thrips (*Thrips tabaci*). Apply as a foliar spray at the first sign of pest infestation. Retreatment interval not specified. Maximum of 2 applications per crop. Do not apply consecutive applications.	M Bee:M	R2

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Malathion	1B	Contact	3	A	ALL	Registered in celery for control of Aphids, Cabbage Moth (*Plutella xylostella*), Cabbage White Butterfly (*Pieris rapae*), Green Vegetable Bug (*Nezara viridula*), Jassids / Leafhoppers, Rutherglen Bug (*Nysius vinitor*) and **Thrips**. Apply as a foliar spray when pest first appears. Retreatment interval not specified. Maximum of 4 applications per crop.	H Bee:H	R4
Methomyl PER82428	1A	Contact	3	A	ALL	Permitted for in celery 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 monitoring identifies early stages of a pest incursion. Use a retreatment interval of 7 days. Maximum of 3 applications per crop.	H Bee:H	R2
Orange Oil (Prev-Am) Oro Agri	-	Contact	NR	A	ALL	Registered in celery for suppression of Onion Thrips (*Thrips tabaci*), **Western Flower Thrips** (*Frankliniella occidentalis*), Green Peach Aphid (*Myzus persicae*), Cabbage Aphid (*Brevicoryne brassicae*) and Serpentine Leafminer (*Liriomyza brassicae*). Apply as a foliar spray starting early in the pest infestation and use at least 2 consecutive applications at a retreatment interval of 5-12 days. Maximum number of applications not specified.	VL Bee:VL	R4
Petroleum Oil PER12221	-	Contact	1	A	ALL (excl. VIC)	Permitted in celery for control of Aphids, Green Mirid, Green Vegetable Bug, Grey Cluster Bug, Leafhoppers, Mites, Rutherglen Bug and **Thrips**. Apply as a foliar spray when pest numbers are at a low level. Retreatment interval and maximum number of applications per crop not specified.	VL Bee:L	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	3	A	ALL	Registered in celery for control of Green Peach Aphid (*Myzus persicae*), Cotton Aphid (*Aphis gossypii*), **Western Flower Thrips** (*Frankliniella occidentalis*), Tomato Thrips (*Frankliniella schultzei*) and **Plague Thrips** (*Thrips imaginis*). Apply as a foliar spray, commencing when local thresholds are reached. Use a minimum retreatment interval of 7 days. Maximum of 2 applications per crop.	M Bee:VL	R4
Cyantraniliprole (Benevia) FMC PER93850	28	Ingestion	1 NG	P-A	ALL (excl. VIC)	Permitted in celery for control of Liriomyza Leafminers, including Vegetable Leafminer (*Liriomyza sativae*), Pea Leafminer / Serpentine Leafminer (*Liriomyza huidobrensis*) and American Serpentine Leafminer (*Liriomyza trifolii*). Registered for suppression of **Western Flower Thrips** in fruiting vegetables, cucurbits, **Plague Thrips** in potatoes, and **Western Flower Thrips** and **Plague Thrips** in strawberries.	M Bee:VH	R4
Isocycloseram (Simodis) Syngenta PER94854	30	Ingestion	3	P-A	ALL (excl. VIC)	Permitted in celery for control of Serpentine Leafminer (*Liriomyza huidobrensis*). Registered for suppression of **Plague Thrips** (*Thrips imaginis*) in bulb vegetables, and **Western Flower Thrips** (*Frankliniella occidentalis*) and **Plague Thrips** (*Thrips imaginis*) in cucurbits and fruiting vegetables.	H Bee:H	R4
Spinetoram (Success Neo) Corteva	5	Ingestion	1	P-A	ALL	Registered in stalk & stem vegetables, including celery, for control of *Helicoverpa* spp. Registered for control of **Western Flower Thrips** in brassica vegetables, bulb vegetables, cucurbits, fruiting vegetables, leafy vegetables, legume vegetables, ornamentals and berryfruit.	M Bee:H	R4
Spinosad (Entrust Organic) Corteva	5	Ingestion	1	P-A	ALL	Registered in stalk & stem vegetables, including celery, for control of Heliothis. Registered for control of **Western Flower Thrips** in brassica vegetables, cucurbits, fruiting vegetables, leafy vegetables, legume vegetables, ornamentals, berryfruit, pome fruit and stone fruit.	L Bee:L	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Cutworms (*Agrotis spp.*) **Priority: Moderate**								
Cutworms are rated as a moderate priority. 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 is generally rare in most crops, but it can impact plant densities. 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. MT16009 IPM Project Recommends: Predatory wasps, rotation, and early insecticide applications.								
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
Bifenthrin (Talstar) PER86599	3A	Contact	NR	P-A	ALL	Permitted in celery for control of Red Legged Earth Mite (*Halotydeus destructor*). 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
Methomyl PER82428	1A	Contact	3	P-A	ALL	Permitted for in celery 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
Broflanilide (Cimegra) BASF	30	Contact & Ingestion		P		Registered in brassica vegetables and Chinese cabbage for control of Diamondback Moth. Broad-spectrum activity on soil-dwelling pests although specific effect on **Cutworm** 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

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
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	R4
Rutherglen Bug (*Nysius vinitor*) **Priority: Moderate**								
Rutherglen Bug is rated as a moderate priority. This pest breeds up on weeds and scrub adjacent to cropping areas. It is important to monitor crops for eggs and nymphs by regular field scouting. Large numbers can cause significant feeding damage to foliage by sucking the sap and depleting the crop of nutrients. Growers should anticipate potential migrations of pests from one finishing crop to another emerging one. Rutherglen Bugs can be controlled by removing the weeds they use as hosts and by ploughing a deep furrow around the emerging crop, preventing wingless nymphs from migrating from weeds or harvested crops.								
Malathion	1B	Contact	3	A	ALL	Registered in celery for control of Aphids, Cabbage Moth (*Plutella xylostella*), Cabbage White Butterfly (*Pieris rapae*), Green Vegetable Bug (*Nezara viridula*), Jassids / Leafhoppers, **Rutherglen Bug** (*Nysius vinitor*) and Thrips. Apply as a foliar spray when pest first appears. Retreatment interval not specified. Maximum of 4 applications per crop.	H Bee:H	R4
Methomyl PER82428	1A	Contact	3	A	ALL	Permitted for in celery 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 monitoring identifies early stages of a pest incursion. Use a 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
Petroleum Oil PER12221	-	Contact	1	A	ALL (excl. VIC)	Permitted in celery for control of Aphids, Green Mirid, Green Vegetable Bug, Grey Cluster Bug, Leafhoppers, Mites, **Rutherglen Bug** and Thrips. Apply as a foliar spray when pest numbers are at a low level. Retreatment interval and maximum number of applications per crop not specified.	VL Bee:L	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		P		Registered for control of Macadamia Lace Bug and Fruit Spotting Bugs in macadamia, Fruit Spotting Bugs in tropical & sub-tropical fruit, inedible peel (excluding banana, pineapple), and Olive Lace Bug in olives.	L Bee:VL	R4
Sulfoxaflor (Transform) Corteva	4C	Contact & Ingestion		P		Registered for suppression of **Rutherglen Bug** in cucurbits, fruiting vegetables, leafy vegetables, root & tuber vegetables, brassica vegetables, cane berries and strawberries.	M Bee:VH	R4
Root-Knot Nematode (*Meloidogyne* spp.) **Priority: Moderate**								
Root-Knot Nematode is rated as a moderate priority. Soil-borne nematodes are minute, worm-like animals that can invade plant roots near the root tip. Affected plants have an unthrifty appearance and often show symptoms of stunting, wilting or chlorosis. 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

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	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, **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
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
Abamectin (Tervigo) Syngenta	N-2	Contact		P		Registered for control of **Root-Knot Nematode** (*Meloidogyne* spp.) in fruiting vegetables, cucurbits, potato and sweet potato.	M Bee:H	R3
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
Fluazaindolizine (Salibro Reklemel) Corteva	N-UN	Contact		P		Registered for control of **Root-Knot Nematode** (*Meloidogyne* spp.) in cucurbits, fruiting vegetables, root & tuber vegetables and sweet potato.	-	R4
Fluensulfone (Nimitz) Adama	-	Contact		P		Registered for control of **Root-Knot Nematode** (*Meloidogyne* spp.) in cucurbits, tomatoes, capsicum, chilli, eggplant, okra, carrots, potatoes, sweet potatoes and sugar cane.	L Bee:L	R4
Fluopyram (Velum Prime) Bayer	N-3	Contact		P		Registered for control of **Root-Knot Nematode** (*Meloidogyne* spp.) in root & tuber vegetables.	L Bee:L	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
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
Snails & Slugs (Gastropoda) **Priority: Moderate**								
Snails and Slugs are rated as a moderate priority. Snails cause direct feeding damage to celery stalks leading to reduced yields or marketability. Molluscicides can be used as a broadcast across the field or applied to localised areas of infestation.								
Iron Powder	-	Contact	NR	A	ALL	Registered in vegetables for control of **Slugs** & **Snails**. Broadcast pellets around plants to be protected.	-	R4
Metaldehyde	-	Contact	7	A	ALL	Registered in horticultural crops for control of **Snails** and **Slugs**. Broadcast evenly over the ground where snails and slugs are active or incorporate with seed when direct drilling. Treatments per season not limited.	-	R4
Green Vegetable Bug (*Nezara viridula*) **Priority: Low**								
Green Vegetable Bug are rated as a moderate priority. They are a sporadic sucking pest that will migrate into crops from shade lines and vegetation along watercourses. Symptoms include lack of crop vigour and in severe cases can lead to reduced yield.								
Malathion	1B	Contact	3	A	ALL	Registered in celery for control of Aphids, Cabbage Moth (*Plutella xylostella*), Cabbage White Butterfly (*Pieris rapae*), **Green Vegetable Bug** (*Nezara viridula*), Jassids / Leafhoppers, Rutherglen Bug (*Nysius vinitor*) and Thrips. Apply as a foliar spray when pest first appears. Retreatment interval not specified. Maximum of 4 applications per crop.	H Bee:H	R4
Petroleum Oil PER12221	-	Contact	1	A	ALL (excl. VIC)	Permitted in celery for control of Aphids, Green Mirid, **Green Vegetable Bug**, Grey Cluster Bug, Leafhoppers, Mites, Rutherglen Bug and Thrips. Apply as a foliar spray when pest numbers are at a low level. Retreatment interval and maximum number of applications per crop not specified.	VL Bee:L	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
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		P		Registered for control of Macadamia Lace Bug and Fruit Spotting Bugs in macadamia, Fruit Spotting Bugs in tropical & sub-tropical fruit, inedible peel (excluding banana, pineapple), and Olive Lace Bug in olives.	L Bee:VL	R4
Common Armyworm (*Mythimna convecta*) **Southern Armyworm** (*Persectania ewingii*) **Cluster Caterpillar** (*Spodoptera litura*) **Priority: Low**								
Common Armyworm, Southern Armyworm and Cluster Caterpillar are rated as a low priority. Larvae feed on the leaf surface and can cause extensive leaf loss when the pest is in large numbers.								
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
Emamectin (Proclaim Opti) Syngenta PER88066	6	Ingestion	3	A	ALL (excl. VIC)	Permitted in celery (field only) for control of *Helicoverpa* spp., Light Brown Apple Moth (*Epiphyas postvittana*) and **Cluster Caterpillar** (*Spodoptera litura*). Apply as a foliar spray at first sign of infestation. Use a minimum retreatment interval of 7 days. Maximum of 4 applications per crop.	M 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

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Methomyl PER82428	1A	Contact	3	A	ALL	Permitted for in celery 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 monitoring identifies early stages of a pest incursion. Use a retreatment interval of 7 days. Maximum of 3 applications per crop.	H Bee:H	R2
Chlorantraniliprole (Coragen) FMC	28	Ingestion	3	P-A	ALL	Registered in celery for control of Cotton Bollworm (*Helicoverpa armigera*) and Native Budworm (*Helicoverpa punctigera*).	L Bee:VL	R4
Flubendiamide (Belt) Bayer	28	Ingestion	1	P-A	ALL	Registered in celery for control of Heliothis (*Helicoverpa* spp.)	L-M Bee:L	R4
Indoxacarb (Avatar Evo) FMC	22A	Ingestion	7 NG	P-A	ALL	Registered in celery for control of Beet Web Worm (*Spolodea recurvalis*), Cotton Bollworm (*Helicoverpa armigera*), Native Budworm (*Helicoverpa punctigera*), Light Brown Apple Moth (*Epiphyas postvittana*) and Vegetable Weevil (*Listroderes obliquus*).	L Bee:H	R4
Isocycloseram (Simodis) Syngenta PER94854	30	Ingestion	3	P-A	ALL (excl. VIC)	Permitted in celery for control of Serpentine Leafminer (*Liriomyza huidobrensis*). Registered for control of Diamondback Moth and Cabbage White Butterfly in brassica vegetables and brassica leafy vegetables, and for suppression of Heliothis in brassica vegetables, brassica leafy vegetables, cucurbits and fruiting vegetables.	H Bee:H	R4
Spinetoram (Success Neo) Corteva	5	Ingestion	1	P-A	ALL	Registered in stalk & stem vegetables, including celery, for control of *Helicoverpa* spp.	M Bee:H	R4
Spinosad (Entrust Organic) Corteva	5	Ingestion	1	P-A	ALL	Registered in stalk & stem vegetables, including celery, for control of Heliothis.	L Bee:L	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		Controls a range of Lepidopteran pests. Registrations and permits to control Lepidoptera pests in various vegetables including fruiting vegetables and lettuce.	VL Bee:VL	R4
Loopers (*Chrysodeixis* spp.) **Priority: Low**								
Loopers are rated as a low priority. The larvae are voracious leaf feeders, but they do not usually inflict serious damage in celery. They are easily controlled by insecticides when present in large numbers.								
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
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	3	A	ALL	Permitted for in celery 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 monitoring identifies early stages of a pest incursion. Use a retreatment interval of 7 days. Maximum of 3 applications per crop.	H Bee:H	R2
Chlorantraniliprole (Coragen) FMC	28	Ingestion	3	P-A	ALL	Registered in celery for control of Cotton Bollworm (*Helicoverpa armigera*) and Native Budworm (*Helicoverpa punctigera*).	L Bee:VL	R4
Emamectin (Proclaim Opti) Syngenta PER88066	6	Ingestion	3	P-A	ALL (excl. VIC)	Permitted in celery (field only) for control of *Helicoverpa* spp., Light Brown Apple Moth (*Epiphyas postvittana*) and Cluster Caterpillar (*Spodoptera litura*).	M Bee:H	R3
Flubendiamide (Belt) Bayer	28	Ingestion	1	P-A	ALL	Registered in celery for control of Heliothis (*Helicoverpa* spp.)	L-M Bee:L	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Indoxacarb (Avatar Evo) FMC	22A	Ingestion	7 NG	P-A	ALL	Registered in celery for control of Beet Web Worm (*Spolodea recurvalis*), Cotton Bollworm (*Helicoverpa armigera*), Native Budworm (*Helicoverpa punctigera*), Light Brown Apple Moth (*Epiphyas postvittana*) and Vegetable Weevil (*Listroderes obliquus*).	L Bee:H	R4
Isocycloseram (Simodis) Syngenta PER94854	30	Ingestion	3	P-A	ALL (excl. VIC)	Permitted in celery for control of Serpentine Leafminer (*Liriomyza huidobrensis*). Registered for control of Diamondback Moth and Cabbage White Butterfly in brassica vegetables and brassica leafy vegetables, and for suppression of Heliothis in brassica vegetables, brassica leafy vegetables, cucurbits and fruiting vegetables.	H Bee:H	R4
Spinetoram (Success Neo) Corteva	5	Ingestion	1	P-A	ALL	Registered in stalk & stem vegetables, including celery, for control of *Helicoverpa* spp.	M Bee:H	R4
Spinosad (Entrust Organic) Corteva	5	Ingestion	1	P-A	ALL	Registered in stalk & stem vegetables, including celery, for control of Heliothis.	L Bee:L	R4
Methoxyfenozide (Prodigy) Corteva	18	Insect Growth Regulator		P		Registered for control of **Loopers** in pome fruit.	VL Bee:VL	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Greenhouse Whitefly (*Trialeurodes* spp.) **Priority: Low**								
Greenhouse Whitefly is rated as a low priority. They rarely require control measures in celery, 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.								
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
Buprofezin (Applaud) Corteva PER82467	16	IGR	3	A	ALL (excl. VIC)	Permitted in celery for control of **Greenhouse Whitefly** (*Trialeurodes vaporariorum*). Apply as a foliar spray as soon as the pest appears. Use a minimum retreatment interval of 14 days. Maximum of 2 applications per crop.	L Bee:VL	R4
Emulsifiable Botanical Oil (Eco-Oil)	-	Contact	NR	A	ALL	Registered in vegetables for control of **Greenhouse Whitefly**. Apply as a foliar spray when pests first appear. Apply 2 sprays using a retreatment interval of 3-5 days. Repeat at signs of infestation. Maximum number of applications per crop not specified.	L 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
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
Afidopyropen (Versys) BASF	9D	Ingestion	1	P-A	ALL	Registered in celery for control of Green Peach Aphid (*Myzus persicae*), Cabbage Aphid (*Brevicoryne brassicae*), Currant Lettuce Aphid (*Nasonovia ribis-nigri*), Cotton Aphid / Melon Aphid (*Aphis gossypii*) and Corn Aphid (*Rhopalosiphum maydis*), and suppression of Silverleaf Whitefly (*Bemisia tabaci*). Registered for control of **Greenhouse Whitefly** (*Trialeurodes* spp.) in ornamentals and nursery stock.	L Bee:L	R4
Petroleum Oil PER12221	-	Contact	1	P-A	ALL (excl. VIC)	Permitted in celery for control of Aphids, Green Mirid, Green Vegetable Bug, Grey Cluster Bug, Leafhoppers, Mites, Rutherglen Bug and Thrips. Registered for control of **Whitefly** in corn, sugar beet, cut flowers and shade trees.	VL Bee:L	R4
Dimpropyridaz (Efficon) BASF	UN	Ingestion		P		Registered for control of **Greenhouse Whitefly** (*Trialeurodes* spp.) in cucurbits, fruiting vegetables and cotton.	M Bee:L	R4
Flupyradifurone (Sivanto Prime) Bayer	4D	Contact & Ingestion		P		Registered for control of **Greenhouse Whitefly** in cucurbits, eggplant, peppers and tomatoes.	L Bee:VL	R4
Flonicamid (Mainman) UPL	29	Ingestion		P		Registered for control of **Greenhouse Whitefly** in tomatoes (protected).	M Bee:L	R4
Pymetrozine (Chess) Syngenta	9B	Contact & Ingestion		P		Registered for suppression of **Greenhouse Whitefly** (*Trialeurodes* spp.) in tomato, eggplant, capsicum, cucurbits, cut flowers and nursery stock.	L Bee:VL	R3
Pyriproxyfen (Admiral)	7C	IGR / Ingestion		P		Registered for control of **Greenhouse Whitefly** (*Trialeurodes vaporariorum*) in 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
Jassids / Leafhoppers (Cicadellidae) **Priority: Low**								
Jassids are rated as a low priority. Jassids are a sap sucking insect that can damage crops in both adult and nymph stages, causing wilting, stunting and distortion of plants. Sooty mould may grow on honey dew after heavy infestations.								
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
Malathion	1B	Contact	3	A	ALL	Registered in celery for control of Aphids, Cabbage Moth (*Plutella xylostella*), Cabbage White Butterfly (*Pieris rapae*), Green Vegetable Bug (*Nezara viridula*), **Jassids** / **Leafhoppers**, Rutherglen Bug (*Nysius vinitor*) and Thrips. Apply as a foliar spray when pest first appears. Retreatment interval not specified. Maximum of 4 applications per crop.	H Bee:H	R4
Petroleum Oil PER12221	-	Contact	1	A	ALL (excl. VIC)	Permitted in celery for control of Aphids, Green Mirid, Green Vegetable Bug, Grey Cluster Bug, **Leafhoppers**, Mites, Rutherglen Bug and Thrips. Apply as a foliar spray when pest numbers are at a low level. Retreatment interval and maximum number of applications per crop not specified.	VL Bee:L	R4
Flupyradifurone (Sivanto Prime) Bayer	4D	Contact & Ingestion		P		Registered for control of suppression of various pests in macadamias and various fruit and vegetables crops. US registration for control of Leafhoppers in alfalfa, brassica vegetables, clover, cucurbits, fruiting vegetables, kava, leaf petiole vegetables, celtuce, leafy vegetables, legume vegetables, peanut, pome fruit, root vegetables, small fruit vine climbing (except fuzzy kiwifruit), taro leaves and tuberous & corm vegetables.	L Bee:VL	R4

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Sulfoxaflor (Transform) Corteva	4C	Contact & Ingestion		P		Registered for control of Aphids and other insect pests in various fruit and vegetable crops. US registration for control of **Leafhoppers** in berries, pome fruit and root and tuber vegetables.	M Bee:VH	R4
Bryobia Mite (*Bryobia rubrioculus*) **European Red Mite** (*Panonychus ulmi*) **Rust Mite** (Eriophydae) **Tomato Russet Mite** (*Aculops lycopersici*) **Two Spotted Mite** (*Tetranychus urticae*) **Priority: Low**								
Mites are rated as a low priority. Mites feed on aerial parts of the plant and tend to shelter on the underside of leaves. Severe infestations will cause reddening of leaves and can lead to leaf drop and reduced crop vigour in patches.								
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 Mite**. 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
Petroleum Oil PER12221	-	Contact	1	A	ALL (excl. VIC)	Permitted in celery for control of Aphids, Green Mirid, Green Vegetable Bug, Grey Cluster Bug, Leafhoppers, **Mites**, Rutherglen Bug and Thrips. Apply as a foliar spray when pest numbers are at a low level. Retreatment interval and maximum number of applications per crop not specified.	VL Bee:L	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
Propargite (Omite)	12C	Contact	7	A	ALL	Registered in vegetables for control of **Two-Spotted Mites** and Spider Mites. Apply as a foliar spray when pests appear. Retreatment interval and maximum number of applications per crop not specified.	M Bee:L	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
Isocycloseram (Simodis) Syngenta PER94854	30	Ingestion	3	P-A	ALL (excl. VIC)	Permitted in celery for control of Serpentine Leafminer (*Liriomyza huidobrensis*). Registered for control of **Two Spotted Mite** in cucurbits and fruiting vegetables.	H Bee:H	R4
Orange Oil (Prev-Am) Oro Agri	-	Contact	NR	P-A	ALL	Registered in celery for suppression of Onion Thrips (*Thrips tabaci*), Western Flower Thrips (*Frankliniella occidentalis*), Green Peach Aphid (*Myzus persicae*), Cabbage Aphid (*Brevicoryne brassicae*) and Serpentine Leafminer (*Liriomyza brassicae*). Registered for control of **Two Spotted Mite** in fruiting vegetables, cucurbits, legume vegetables, berries, apples, citrus and pawpaw.	VL Bee:VL	R4
Abamectin	6	Ingestion		P		Registered for control of **Two-Spotted Mite** in pome fruit, berries, cotton, cucumber, squash, zucchini, spring onions, shallots, snow peas, sugar snap peas, sweet corn, fruiting vegetables, custard apple, hops, lettuce, lychee, ornamentals, papaya, passionfruit and strawberries.	M Bee:H	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

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Cyflumetofen (Danisaraba) BASF	25A	Contact		P		Registered for control of **Two Spotted Mite** (*Tetranychus urticae*) in pome fruit, almond, citrus, grapes, strawberries, fruiting vegetables and ornamentals.	L Bee:L	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
Spiromesifen (Interrupt) Bayer	23	Ingestion		P		Registered for control of **Two Spotted Mite** in pome fruit and stone fruit.	M Bee:VL	R4
Spotted Vegetable Weevil (*Desiantha diversipes*) **Vegetable Weevil** (*Listroderes difficilis*) **Priority: Low**								
Spotted Vegetable Weevil and Vegetable Weevil are rated as a low priority. Weevils are soil-borne pests that cause direct feeding damage to celery stalks, making them unsaleable. Control options are limited.								
Indoxacarb (Avatar Evo) FMC	22A	Ingestion	7 NG	A	ALL	Registered in celery for control of Beet Web Worm (*Spolodea recurvalis*), Cotton Bollworm (*Helicoverpa armigera*), Native Budworm (*Helicoverpa punctigera*), Light Brown Apple Moth (*Epiphyas postvittana*) and **Vegetable Weevil** (*Listroderes obliquus*). Apply as a foliar spray when pest first appears. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop.	L Bee:H	R4
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

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
African Black Beetle (*Heteronychus arator*) **Priority: Low**								
African Black Beetle is rated as a low priority. They are a soil-borne pest that have a voracious appetite and can cause severe damage to foliage and stems if the numbers get high. Control options are limited.								
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
Broflanilide (Cimegra) BASF	30	Contact & Ingestion		P		Registered in brassica vegetables and Chinese cabbage for control of Diamondback Moth. Broad-spectrum 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

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Black Field Cricket (*Teleogryllus commodus*) **Mole Cricket** (*Gryllotalpa australis*) **Priority: Low**								
Black Field Cricket and Mole Cricket are rated as a low priority. They are a soil-borne pest that have a voracious appetite and can cause severe damage to foliage if the numbers get high. Damage is usually limited to feeding on newly established plants and reducing plant populations. Control options are limited.								
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) PER83203	2B	Contact	7	P-A	ALL (excl. VIC)	Permitted in celery for control of Western Flower Thrips (*Frankliniella occidentalis*). Registered for control of **Mole Crickets** in potatoes.	M Bee:H	R2
Wireworm (Elateridae) **False Wireworm** (*Gonocephalum* spp.) **Priority: Low**								
Wireworm and False Wireworm are rated as a low priority. Larvae attack germinating seeds, the hypocotyl, roots and at the surface of young plants resulting in seedling death and patchy plant stands. The adult beetles can also damage seedlings by chewing at or just above ground level. Soil pests can reduce plant establishment, row density and vigour. Bait sampling prior to planting should be used to determine the presence of soil pests such as wireworm. Clean fallows (free from weeds) generally cause pest insect numbers to decline due to a lack of food. Infestations of wireworm larvae detected after crop emergence cannot be controlled with baiting or surface spraying. Therefore, this pest must be detected before planting for control actions to be effective.								
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

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	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, 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) PER83203	2B	Contact	7	P-A	ALL (excl. VIC)	Permitted in celery for control of Western Flower Thrips (*Frankliniella occidentalis*). Registered for control of **Wireworm** in potato, sweet potato and sugar cane.	M Bee:H	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. Canadian registration for control of **Wireworms** in corn and potatoes.	H Bee:VH	R4
Red Legged Earth Mite (*Halotydeus destructor*) **Priority: Low**								
Red Legged Earth Mite is rated as a low 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.								
Bifenthrin (Talstar) PER86599	3A	Contact	NR	A	ALL	Permitted in celery for control of **Red Legged Earth Mite** (*Halotydeus destructor*). Apply to bare soil after cultivation and sowing. Maximum of 1 application per crop.	VH Bee:H	R3
Fall Armyworm (*Spodoptera frugiperda*) **Priority: Low**								
Fall Armyworm is rated as a low priority. Fall Armyworm is an exotic pest that can reproduce prolifically, especially in warm weather. It is important to monitor crops for any incursions.								
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
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
Spinosad (Entrust Organic) Corteva PER89870	5	Ingestion	1 G:14	A	ALL (excl. VIC)	Permitted in celery for control of **Fall Armyworm** (*Spodoptera frugiperda*). Apply as a foliar spray, targeting eggs and newly hatched larvae before they become entrenched. Use a retreatment interval of 7-14 days. Maximum of 4 applications per season.	L Bee:L	R4

4.3 Weeds in Celery

4.3.1 Weed priorities

Common Name	Scientific Name
High	
Marshmallow	*Malva parviflora*
Winter Grass	*Poa annua*
Groundsel	*Senecio vulgaris*
Oxalis / Sour Sob	*Oxalis pes-caprae*
Moderate	
Nutgrass	*Cyperus rotundus*
Potato Weed	*Galinsoga* spp.
Stinging Nettle	*Urtica* spp.
Blackberry Nightshade	*Solanum nigrum*
Fat Hen	*Chenopodium album*

The high priority weed issues are Marshmallow, Winter Grass, Groundsel and Oxalis / Soursob. 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 cultivation and knockdown herbicides as pre-plant weed control to ensure minimal weed populations at the start of the crop. There are limited pre-emergent and post-emergence herbicide options currently available for use in crop. Access to additional modes of action would be desirable to reduce reliance on mechanical weed control measures.

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[7].

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

4.3.2 Available and potential products for weed control

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

Availability			
A	Available via either registration or permit approval		
P	Potential – a possible candidate to pursue for registration or permit		
P-A	Potential, already approved in the crop for another use		
Resistance risk		**Regulatory risk (refer to Appendix 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
Marshmallow (*Malva parviflora*) **Priority: High**							
Marshmallow is ranked as a high priority. It is adapted to a wide variety of environments and a 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
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
Winter Grass (*Poa annua*) **Priority: High**							
Winter Grass is ranked as a high priority. It is a widespread annual grass weed that is difficult to control with herbicides.							
Clethodim (Select)	1***	Celery / Post-Emergent	Registered in celery for control of grass weeds including **Winter Grass** (*Poa annua*). Apply post-emergence to young, actively growing weeds.	63	A	QLD, NSW, ACT, VIC, WA & NT	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
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
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 grass weeds, including **Winter Grass**, in almonds, grapevines, stone fruit, tomatoes and canola.		P		R4
Nonanoic Acid (Beloukha)	-		Registered for control of grass weeds in non-crop areas, turf, orchards & vineyards, fallow and forestry.		P		R4
Norflurazon (Zoliar) AgNova	12**		Registered for control of grass weeds, including **Winter Grass**, in citrus, grapes, nuts, stone & pome fruits.		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
Groundsel (*Senecio vulgaris*) **Priority: High**							
Groundsel is ranked as a high priority. It is a densely branched shrub which is highly invasive, a prolific seed producer and difficult to control.							
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 + 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
Chloridazon (Pyramin) BASF	5**	Pre-Emergent	Registered for control of grass and broadleaf weeds, including **Groundsel**, in fodder beet, red beet, silver beet, baby leaf spinach and baby leaf beet.		P		R4
Nonanoic Acid (Beloukha)	-		Registered for control of grass and broadleaf weeds, including **Groundsel**, in non-crop areas, turf, orchards & vineyards, fallow and forestry.		P		R4
Oxyfluorfen (Goal)	14**		Registered for control of broadleaf weeds, including **Groundsel,** in brassica vegetables, coffee, duboisia, forestry, onion, pyrethrum, tobacco, and tropical & sub-tropical fruit (inedible peel).		P		R4
Phenmedipham (Betanal) Bayer	5**	Post-Emergent	Registered for control of grass and broadleaf weeds, including **Groundsel**, in beetroot, fodder beet and silverbeet.		P		R4
Oxalis / Sour Sob (*Oxalis pes-caprae*) **Priority: High**							
Oxalis / Sour Sob is ranked as a high priority. It is a perennial broadleaf weed which can spread aggressively through seeds, rhizomes and stolons. Herbicide control can be effective provided application is targeted to young, actively growing weeds.							
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
Norflurazon (Zoliar) AgNova	12**		Registered for control of grass weeds, including **Soursob**, in citrus, grapes, nuts, stone & pome fruits.		P		R4
Oxyfluorfen (Goal)	14**		Registered for control of broadleaf weeds, including suppression of **Soursob,** in brassica vegetables, coffee, duboisia, forestry, onion, pyrethrum, tobacco, and tropical & sub-tropical fruit (inedible peel).		P		R4
Nutgrass (*Cyperus rotundus*) **Priority: Moderate**							
Nutgrass is ranked as a moderate priority. It is not a problem in Victorian crops. Nutgrass 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.							
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Registered for control of grass and broadleaf weeds, and **Nutgrass**, as a pre-crop spray or fallow spray.	NR	A	ALL	R3
Ethyl Dipropylthiocarbamate (Eptam)	15**		Registered for control of **Nutgrass** in non-crop situations.		P		R4
Norflurazon (Zoliar) AgNova	12**		Registered for control of **Nutgrass** in asparagus, citrus, grapes, nuts, stone & pome fruits.		P		R4
Potato Weed (*Galinsoga* spp.) **Priority: Moderate**							
Potato Weed is ranked as a moderate priority. It is an annual broadleaf weed that is spread via seed, producing several generations in one year that can remain dormant for some time. It forms a dense mat, outcompeting newly germinating crop seedlings. It can be controlled by herbicides but ongoing management is critical as seed can survive long periods underground.							
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 + 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**	Celery / Pre-Emergence	Registered in celery for control of grass & broadleaf weeds, including Fat Hen, Nettle and **Potato Weed**. Apply pre-emergence to bare soil.	NR	A	ALL (excl. TAS)	R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Chloridazon (Pyramin) BASF	5**	Pre-Emergent	Registered for control of grass and broadleaf weeds, including **Potato Weed**, in fodder beet, red beet, silver beet, baby leaf spinach and baby leaf beet.		P		R4
Clomazone	13**	Pre-Emergence Weed Control	Registered for control of various broadleaf weeds, including **Potato Weed** in cucumber, pumpkins, kabocha, squash, rockmelons, watermelon, zucchini, green beans, navy bean and poppies.		P		R4
Oxyfluorfen (Goal)	14**		Registered for control of grass and broadleaf weeds, including **Potato Weed** in Brassica vegetables and fruit and nut trees. Compatible with glyphosate and diquat/paraquat.		P		R4
Phenmedipham (Betanal) Bayer	5**	Post-Emergent	Registered for control of grass and broadleaf weeds, including **Potato Weed**, in beetroot, fodder beet and silverbeet.		P		R4
Propachlor (Ramrod) Nufarm	15**		Registered for control of grass and broadleaf weeds, including **Potato Weed**, in maize, sorghum, sweet corn, onions, broccoli, brussel sprouts, cabbage, cauliflower, Chinese cabbage and beetroot.		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
Stinging Nettle (*Urtica* spp.) **Priority: Moderate**							
Stinging Nettle is ranked as a moderate priority. It is a soft herb whose leaves are sparsely covered with rigid, stinging hairs. Herbicide control options are limited.							
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 + 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**	Celery / Pre-Emergence	Registered in celery for control of grass & broadleaf weeds, including Fat Hen, **Nettle** and Potato Weed. Apply pre-emergence to bare soil.	NR	A	ALL (excl. TAS)	R4
Oxyfluorfen (Goal)	14**		Registered for control of **Stinging Nettle** in fallow, Brassica vegetables and fruit and nut trees. Compatible with glyphosate and diquat/paraquat.		P		R4
Pendimethalin (Stomp)	3**		Registered for control of **Nettles** in carrots, processing peas, cabbage, cauliflower, broccoli and lettuce.		P		
Propachlor (Ramrod) Nufarm	15**		Registered for control of grass and broadleaf weeds, including **Stinging Nettle**, in maize, sorghum, sweet corn, onions, broccoli, brussel sprouts, cabbage, cauliflower, Chinese cabbage and beetroot.		P		R4
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of **Stinging Nettle** in Brassica vegetables and beans.		P		R4
Blackberry Nightshade (*Solanum nigrum*) **Priority: Moderate**							
Blackberry Nightshade is ranked 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.							
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**	Celery / Post-Emergent	Registered in celery for control of annual broadleaf weeds and grasses, including Fat Hen and **Blackberry Nightshade**. Apply post-emergence when crop is 2-4 true leaf and weeds no more than 7 cm tall.	NR	A	ALL	R4
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
Ethyl Dipropylthiocarbamate (Eptam)	15**		Registered for control of grass and broadleaf weeds, including **Blackberry Nightshade**, in beans, potatoes, maize and sweet corn.		P		R4

Active Ingredient (Trade Name)	Chemical Group	Crop / Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
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
Ethyl Dipropylthiocarbamate (Eptam)	15**		Registered for control of grass and broadleaf weeds, including **Blackberry Nightshade**, in beans, potatoes, maize and sweet corn.		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
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 (*Chenopodium album*) **Priority: Moderate**							
Fat Hen is ranked 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.							
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**	Celery / Post-Emergent	Registered in celery for control of annual broadleaf weeds and grasses, including **Fat Hen** and Blackberry Nightshade. Apply post-emergence when crop is 2-4 true leaf and weeds no more than 7 cm tall.	NR	A	ALL	R4
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**	Celery / Pre-Emergence	Registered in celery for control of grass & broadleaf weeds, including **Fat Hen**, Nettle and Potato Weed. Apply pre-emergence to bare soil.	NR	A	ALL (excl. TAS)	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
Ethyl Dipropylthiocarbamate (Eptam)	15**		Registered for control of grass and broadleaf weeds, including **Fat Hen**, in beans, potatoes, maize and sweet corn.		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
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

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

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:

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6. Appendices:

Appendix 1. Products available for disease control in celery
Appendix 2. Products available for control of insects and mites in celery
Appendix 3. Products available for weed control in celery
Appendix 4. Current permits for use in celery
Appendix 5. Celery Maximum Residue Limits (MRLs)
Appendix 6. Celery Agrichemical Regulatory Risk Assessment

Appendix 1. Products available for disease control in celery

Active Ingredient (Trade Name)	Chemical group	Situation	Diseases / Comments	States	WHP Days	Regulatory risk
1,3-dichloropropene + Chloropicrin + (Telone C-35)	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
Boscalid (Filan) PER11127	7	Celery	Sclerotinia	ALL (excl. VIC)	14	R4
Chlorothalonil (Bravo)	M5	Celery	Septoria Leaf Spot (*Septoria apiicola*)	ALL	1	R2
			Cercospora Early Blight (*Cercospora apii*)	NSW & WA		
Copper	M1	Celery	Leaf Spot (*Septoria apiicola*) Bacterial Soft Rot (*Erwinia carotovora pv carotovora*)	ALL	1	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
Difenoconazole	3	Celery	Cercospora Leaf Spot Septoria Spot	ALL	7	R3
Hydrogen Peroxide + Peroxyacetic Acid (Peratec Plus)	M	Celery	Cercospora Leaf Spot (*Cercospora* spp.)	ALL	1	R4
Iodine	-	Celery	Post-Harvest Sanitiser – Bacteria and Fungi	ALL	NR	R4
Iprodione (Rovral)	2	Celery	Sclerotinia Rot / Pink Rot (*Sclerotinia sclerotiorum*)	ALL	1	R4
Mancozeb	M3	Celery	Septoria Leaf Spot	ALL	7	R2

Active Ingredient (Trade Name)	Chemical group	Situation	Diseases / Comments	States	WHP Days	Regulatory risk
Metalaxyl-M + Mancozeb (Ridomil Gold MZ) Syngenta PER13673	4+M3	Celery	Septoria Leaf Spot / Late Blight (*Septoria apiicola*)	ALL (excl. VIC)	14	R2
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)	M3	Celery	Early Blight (*Cercospora apii*) Late Blight (*Septoria apiicola*)	ALL (excl. SA)	2	R2
Propiconazole (Tilt) PER14479	3	Celery	Septoria Spot (*Septoria apiicola*) Early Blight (*Cercospora apii*)	ALL (excl. VIC)	14 NG	R3
Propineb	M3	Celery	Septoria Leaf Spot	VIC, TAS & WA	7	R2
Pydiflumetofen + Difenoconazole (Miravis Duo) Syngenta	7+3	Celery	Cercospora Leaf Spot (*Cercospora apii*) Septoria Leaf Spot (*Septoria apiicola*)	ALL	1	R3
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
Thiram	M3	Celery	Septoria Leaf Spot (*Septoria* spp.) Anthracnose (*Colletotrichum* / *Microdochium* spp.) Botrytis (*Botrytis cinerea*)	ALL (excl. NSW)	7	R2
Trifloxystrobin (Flint) PER14494	11	Celery / Field Grown	Cercospora Leaf Spot (*Cercospora apii*) Septoria Leaf Spot (*Septoria apiicola*)	ALL (excl. VIC)	3	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Diseases / Comments	States	WHP Days	Regulatory risk
Zineb	M3	Celery	Cercospora Leaf Spot / Early Blight	ALL (excl. QLD)	7	R2
			Septoria Leaf Spot	QLD		
Ziram	M3	Celery	Septoria Leaf Spot (*Septoria apiicola*)	ALL	7	R2

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

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
Afidopyropen (Versys) BASF	9D	Celery	Green Peach Aphid (*Myzus persicae*) Cabbage aphid (*Brevicoryne brassicae*) Currant Lettuce Aphid (*Nasonovia ribis-nigri*) Cotton Aphid / Melon Aphid (*Aphis gossypii*) Corn Aphid (*Rhopalosiphum maydis*) Suppression of: Silverleaf Whitefly (*Bemisia tabaci*)	ALL	1	R4
Bacillus thuringiensis subsp. kurstaki (DiPel)	11A	Vegetables	Lepidoptera	ALL	NR	R4
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
Bifenthrin (Talstar) PER86599	3A	Celery	Red Legged Earth Mite (*Halotydeus destructor*)	ALL	NR	R3
Buprofezin (Applaud) Corteva PER82467	16	Celery	Greenhouse Whitefly (*Trialeurodes vaporariorum*)	ALL (excl. VIC)	3	R4
Chlorantraniliprole (Coragen) FMC	28	Celery	Cotton Bollworm (*Helicoverpa armigera*) Native Budworm (*Helicoverpa punctigera*)	ALL	3	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
Cyantraniliprole (Benevia) FMC PER93850	28	Celery	Liriomyza Leafminers, including: Vegetable Leafminer (*Liriomyza sativae*) Pea Leafminer / Serpentine Leafminer (*Liriomyza huidobrensis*) American Serpentine Leafminer (*Liriomyza trifolii*)	ALL (excl. VIC)	1 NG	R4
Cyromazine (Diptex 150WP) PER81867	17	Stalk & Stem 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
Emamectin (Proclaim Opti) Syngenta PER88066	6	Celery / Field Only	*Helicoverpa* spp. Light Brown Apple Moth (*Epiphyas postvittana*) Cluster Caterpillar (*Spodoptera litura*)	ALL (excl. VIC)	3	R3
Emulsifiable Botanical Oil (Eco-Oil)	-	Vegetables	Greenhouse Whitefly	ALL	NR	R4
Esfenvalerate (Sumi-Alpha Flex)	3A	Celery	Lucerne Leaf Roller (*Merophyas divulsana*)	WA	1	R4
			Heliothis (*Helicoverpa* spp.)	ALL		
Fipronil (Regent) PER83203	2B	Celery	Western Flower Thrips (*Frankliniella occidentalis*)	ALL (excl. VIC)	7	R2
Flubendiamide (Belt) Bayer	28	Celery	Heliothis (*Helicoverpa* spp.)	ALL	1	R4
Garlic + Chilli + Pyrethrins + Piperonyl Butoxide	3A	Vegetables	Ants, Aphids, Caterpillars, Earwigs, Whitefly, Thrips and Leafhoppers. Suitable for organic growers	ALL	1	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
Imidacloprid PER12489	4A	Celery	Aphids Suppression of: Plague Thrips (*Thrips imaginis*) Onion Thrips (*Thrips tabaci*)	ALL (excl. VIC)	3 NG	R2
Indoxacarb (Avatar Evo) FMC	22A	Celery	Beet Web Worm (*Spolodea recurvalis*) Cotton Bollworm (*Helicoverpa armigera*) Native Budworm (*Helicoverpa punctigera*) Light Brown Apple Moth (*Epiphyas postvittana*) Vegetable Weevil (*Listroderes obliquus*)	ALL	7 NG	R4
Indoxacarb (Avatar Evo) FMC PER14843	22A	Celery	Lucerne Leafroller (*Merophyas divulsana*)	ALL (excl. VIC)	7	R4
Iron Powder	-	Vegetables	Slugs & Snails	ALL	NR	R4
Isocycloseram (Simodis) Syngenta PER94854	30	Celery	Serpentine Leafminer (*Liriomyza huidobrensis*)	ALL (excl. VIC)	3	R4
Malathion	1B	Celery	Aphids Cabbage Moth (*Plutella xylostella*) Cabbage White Butterfly (*Pieris rapae*) Green Vegetable Bug (*Nezara viridula*) Jassids / Leafhoppers Rutherglen Bug (*Nysius vinitor*) Thrips	ALL	3	R4
Metaldehyde	-	Vegetables	Slugs & Snails	ALL	7 NG	R4
Metham Sodium	-	Pre-Plant Soil Fumigant	Plant parasitic Nematodes, weed seeds, and various fungal diseases	ALL	NR	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
Methomyl PER82428	1A	Celery	*Helicoverpa* spp. Cucumber Moth Cluster Caterpillar Loopers Webworm Rutherglen Bug Thrips including Western Flower Thrips	ALL	3	R2
Nuclear Polyhedrosis Virus of *Helicoverpa armigera* (Vivus Max) AgBiTech	31	Celery	Cotton Bollworm (*Helicoverpa armigera*) Native Budworm (*Helicoverpa punctigera*)	ALL	NR	R4
Orange Oil (Prev-Am) Oro Agri	-	Celery	Suppression of: Onion Thrips (*Thrips tabaci*) Western Flower Thrips (*Frankliniella occidentalis*) Green Peach Aphid (*Myzus persicae*) Cabbage Aphid (*Brevicoryne brassicae*) Serpentine Leafminer (*Liriomyza brassicae*)	ALL	NR	R4
Petroleum Oil PER12221	-	Celery	Aphids Green Mirid Green Vegetable Bug Grey Cluster Bug Leafhoppers Mites Rutherglen Bug Thrips	ALL (excl. VIC)	1	R4
Pirimicarb (Aphidex)	1A	Celery	Aphids, including Green Peach Aphid Cotton Aphid	ALL	2	R4
Potassium Salts of Fatty Acids (Natrasoap)	-	Vegetables	Aphids, Thrips, Mealybug, Two Spotted Mites, Spider Mite and Whitefly	ALL	NR	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
Propargite (Omite)	12C	Vegetables	Two-Spotted Mites & Spider Mites	ALL	7	R3
Pymetrozine (Chess) Syngenta	9B	Celery	Aphids	ALL	14	R3
Spinetoram (Success Neo) Corteva	5	Stalk & Stem Vegetables including Celery	*Helicoverpa* spp.	ALL	1	R4
Spinetoram (Success Neo) Corteva PER94451	5	Celery	Liriomyza Leafminers, including: Vegetable Leafminer (*Liriomyza sativae*) Pea Leafminer / Serpentine Leafminer (*Liriomyza huidobrensis*) American Serpentine Leafminer (*Liriomyza trifolii*)	ALL (excl. VIC)	1	R4
Spinosad (Entrust Organic) Corteva	5	Stalk & Stem Vegetables including Celery	Heliothis	ALL	1	R4
Spinosad (Entrust Organic) Corteva PER89870	5	Stalk & Stem Vegetables	Fall Armyworm (*Spodoptera frugiperda*)	ALL (excl. VIC)	1 G:14	R4
Spinosad (Entrust Organic) Corteva PER94331	5	Celery	Liriomyza Leafminers, including: Vegetable Leafminer (*Liriomyza sativae*) Pea Leafminer / Serpentine Leafminer (*Liriomyza huidobrensis*) American Serpentine Leafminer (*Liriomyza trifolii*)	ALL (excl. VIC)	1 G:14	R4
Spirotetramat (Movento) Bayer	23	Celery	Green Peach Aphid (*Myzus persicae*) Cotton Aphid (*Aphis gossypii*) Western Flower Thrips (*Frankliniella occidentalis*) Tomato Thrips (*Frankliniella schultzei*) Plague Thrips (*Thrips imaginis*)	ALL	3	R4

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory risk
Sulphur	UN	Vegetables	Mites	ALL	NR	R4
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 celery

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
Clethodim (Select)	1***	Celery / Post-Emergent	Grass Weeds, including Winter Grass (*Poa annua*)	63	QLD, NSW, ACT, VIC, WA & NT	R4
Fluazifop-P-Butyl (Fusilade)	1***	Celery / Post-Emergent	Grass Weeds	56	ALL	R3
Glyphosate (Roundup)	9**	General Pre-Crop Spray	Grass and Broadleaf Weeds	NR	ALL	R3
Linuron	5**	Celery / Post-Emergent	Annual Grass & Broadleaf Weeds, including Fat Hen and Blackberry Nightshade	NR	ALL	R4
Paraquat + Diquat (SpraySeed)	22**	General Pre-Crop Spray	Grass and Broadleaf Weeds	7	ALL	R1
Prometryn	5**	Celery / Pre-Emergence	Grass & Broadleaf Weeds, including Fat Hen, Nettle and Potato Weed	NR	ALL (excl. TAS)	R4

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

Appendix 4. Current permits for use in celery

Permit No.	Description	Issued Date	Expiry Date	Permit Holder
PER94331	Spinosad (Entrust Organic) / Celery / Liriomyza Leafminers	29-Apr-24	30-Apr-26	Hort Innovation
PER13673 Version 4	Metalaxyl-M + Mancozeb (Ridomil Gold MZ) / Celery / Downy Mildew & Septoria Leaf Spot	22-Apr-13	31-Jul-26	Hort Innovation
PER83203 Version 4	Fipronil (Regent) / Celery / Western Flower Thrips	16-Mar-17	30-Sep-26	Hort Innovation
PER81867 Version 3	Cyromazine (Diptex 150 WP) / Stalk & Stem Vegetables / Liriomyza Leafminers	02-Dec-19	30-Sep-26	Hort Innovation
PER12489 Version 4	Imidacloprid (Confidor) / Celery / Aphids, Thrips	30-Jun-15	31-Dec-26	Hort Innovation
PER93850	Cyantraniliprole (Benevia) / Celery / Liriomyza Leafminers	12-Dec-23	31-Dec-26	Hort Innovation
PER94451	Spinetoram (Success Neo) / Celery / Liriomyza Leafminers	05-Jul-24	31-Jul-27	Hort Innovation
PER14494 Version 3	Trifloxystrobin (Flint 500 WG) / Celery / Cercospora, Septoria	01-Oct-14	31-Aug-27	Hort Innovation
PER12221 Version 5	Petroleum Oil / Celery / Various Insect Pests	29-Jun-12	30-Sep-27	Hort Innovation
PER11127 Version 4	Boscalid (Filan) / Celery / Sclerotinia	30-Jun-15	31-Mar-28	Hort Innovation
PER94854 Version 2	Isocycloseram (Simodis) / Celery / Serpentine Leafminer	09-Aug-24	30-Sep-28	Hort Innovation
PER86599 Version 2	Bifenthrin (Talstar) / Celery / Red Legged Earth Mite	13-Dec-18	31-Oct-28	Hort Innovation
PER82428 Version 5	Methomyl / Celery / *Helicoverpa* spp., Cucumber Moth, Cluster Caterpillar, Looper, Webworm, Rutherglen Bug, Thrips including Western Flower Thrips	22-Apr-16	31-Jan-29	Hort Innovation
PER88066 Version 2	Emamectin (Proclaim) / Celery / Helicoverpa, Light Brown Apple Moth & Cluster Caterpillar	05-Aug-19	30-Jun-29	Hort Innovation
PER14843 Version 4	Indoxacarb (Avatar) / Celery / Lucerne Leafroller	17-Jun-14	30-Jun-29	Hort Innovation
PER14479 Version 6	Propiconazole (Tilt) / Celery / Septoria Spot & Early Blight	12-May-14	31-Aug-29	Hort Innovation
PER82467 Version 4	Buprofezin (Applaud) / Celery / Greenhouse Whitefly	07-Jul-17	31-Mar-30	Hort Innovation

Permit No.	Description	Issued Date	Expiry Date	Permit Holder
PER89870 Version 3	Spinosad (Entrust Organic) / Stalk & Stem Vegetables / Fall Armyworm	21-Jul-20	31-Oct-30	Hort Innovation

Appendix 5. Celery Maximum Residue Limits (MRLs)

CODEX commodity groupings of root and tuber vegetables and subgroups:

VS 0078 Stalk and stem vegetables
VS 2080 Stems and petioles
VS 0624 Celery
Vegetables

Note: Major export markets for celery include Singapore, Malaysia, UAE, Hong Kong and Indonesia. 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
2,2-DPA		Vegetables	*0.1	-
Abamectin	VS0624	Celery	T0.05	0.03
Acetamiprid	VS0624	Celery	-	1.5
Afidopyropen	VS0624	Celery	3	-
	VS2080	Stems and petioles	-	3
Ametoctradin	VS0624	Celery	-	20
Azoxystrobin	VS0624	Celery	-	5
Bifenthrin	VS0624	Celery	T*0.01	-
Boscalid	VS0624	Celery	T15	-
	VR0078	Stalk and stem vegetables	-	30
Buprofezin	VS0624	Celery	T5	-
Chlorantraniliprole	VS0624	Celery	5	7
Chlordane		Vegetables {except fruiting vegetables, cucurbits, sugar beet}	E0.02	-
Chlorothalonil	VS0624	Celery	10	20
Chlorpyrifos	VS0624	Celery	T5	-
Clothianidin	VS2080	Stems and petioles	-	0.04
Cyantraniliprole	VS0624	Celery	T7	15
Cypermethrins (including alpha- and zeta-cypermethrin)	VS0624	Celery	T1	-
Cyprodinil	VS0624	Celery	T30	30
Cyromazine	VR0078	Stalk and stem vegetables	T7	-
	VS0624	Celery	-	4
DDT		Vegetables	E1	-
Diazinon		Vegetables	0.7	-
Dichlobenil	VS0624	Celery	-	0.07
Dicofol		Vegetables {except cucumber; gherkin; tomato}	5	-
Difenoconazole	VS0624	Celery	10	3
Dimethomorph	VS0624	Celery	-	15
Dinotefuran	VS0624	Celery	-	0.6

Chemical	Codex	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Diquat		Vegetables {except beans; broad bean; lupin (dry); onion, bulb; peas; potato; soya bean (dry); sugar beet}	*0.05	-
Dithiocarbamates	VS0624	Celery	5	-
EPTC		Vegetables	*0.04	-
Emamectin	VS0624	Celery	T0.2	-
Fenamidone	VS0624	Celery	-	40
Fenvalerate	VS0624	Celery	2	-
Fipronil	VS0624	Celery	T0.3	-
Flonicamid	VS0624	Celery	-	1.5
Fluazaindolizine	VR0078	Stalk and stem vegetables	-	0.04
Fluazifop-p-butyl	VS0624	Celery	*0.02	-
Flubendiamide	VR0078	Stalk and stem vegetables	5	-
	VS0624	Celery	-	5
Fludioxonil	VS0624	Celery	T15	15
Fluensulfone	VS0624	Celery	-	2
Fluopicolide	VS0624	Celery	-	20
Flutriafol	VS0624	Celery	-	3
Fluxapyroxad	VS0624	Celery	-	10
Glyphosate	VR0078	Stalk and stem vegetables	*0.01	-
Heptachlor		Vegetables {except carrot; soya bean (dry); tomato}	E0.05	-
Imidacloprid	VS0624	Celery	T0.3	6
Indoxacarb	VS0624	Celery	3	-
Inorganic Bromide		Vegetables {except peppers, sweet [capsicum]}	20	-
Iprodione	VS0624	Celery	2	-
Isocycloseram	VS0624	Celery	T4	-
Lindane		Vegetables	E2	-
Linuron	VS0624	Celery	*0.05	-
Malathion	VS0624	Celery	2	-
Mandipropamid	VS0624	Celery	-	20
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	-
Metaldehyde		Vegetables	1	-
Methomyl	VS0624	Celery	3	-
Methoxyfenozide	VS0624	Celery	-	15
Methyl Bromide		Vegetables {except cucumber; peppers}	T*0.05	-
Metoloachlor	VS0624	Celery	T0.05	-
Paraquat		Vegetables {except potato, pulses}	*0.05	-
Pendimethalin	VS0624	Celery	-	0.09
Penthiopyrad	VS0624	Celery	-	15
Permethrin	VS0624	Celery	5	2
Phorate	VS0624	Celery	T*0.01	-

Chemical	Codex	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Piperonyl Butoxide		Vegetables	8	-
Pirimicarb	VS0624	Celery	15	-
Prometryn		Vegetables	*0.1	-
Propargite		Vegetables	3	-
Propiconazole	VS0624	Celery	T5	-
Propineb	VS0624	Celery	2	-
Pydiflumetofen	VS0624	Celery	6	-
	VS2080	Stems and petioles	-	5
Pyraclostrobin	VS0624	Celery	T8	1.5
Pyrethrins		Vegetables	1	-
Pymetrozine	VS0624	Celery	0.2	-
Sethoxydim	VS0624	Celery	0.1	-
Spinetoram	VR0078	Stalk and stem vegetables	2	-
	VS0624	Celery	-	6
Spinosad	VS0624	Celery	2	2
Spirotetramat	VS0624	Celery	5	4
Sulfoxaflor	VS0624	Celery	-	1.5
Thiamethoxam	VS2080	Stems and petioles	-	0.8
Trichlorfon	VS0624	Celery	0.2	-
Trifloxystrobin	VS0624	Celery	T5	1
Trifluralin		Vegetables {except carrot; parsnip; fennel, bulb; galangal, greater}	0.05	-

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 13. Prepared 11 March 2026. CODEX MRLs: CODEX Alimentarius International Food Standards database (April 2026), http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/en/

Appendix 6: Celery Agrichemical Regulatory Risk Assessment

Celery
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 chemicals 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 farm chemicals 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 prohibiting the use in the exporting country to ensure compliance, as breaches of MRLs would adversely affect market access.

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

To assist strategic planning, with respect to future pest management options, the following tables have been developed to highlight the regulatory threats to agrichemicals currently approved for the management of the pests and diseases in celery as well as current initiatives aimed at addressing identified 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	Leaf Miner	Australia: APVMA nominated for reconsideration and spray drift assessment. Codex MRL: 0.03 mg/Kg Canada: Re-evaluation finalised. Label amendments to mitigate risks to human health and environment (July, 2025)
AFIDOPYROPEN	9D	Cabbage aphid, Cotton aphid, Currant lettuce aphid, Green peach aphid, Silverleaf whitefly	Australia: No current concerns. Codex MRL: 3 mg/Kg 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)
BIFENTHRIN	3A	PER86599 for the control of Red legged earthmite	Australia: APVMA nominated for reconsideration after 2029. Permit PER86599 Expiry date: 31/10/2028 EU: Not approved Canada: Cancelled
BUPROFEZIN	16	PER82467 for the control of greenhouse whitefly	Australia: No current concerns. Permit PER82467 Expiry date: 31/03/2030

Active Constituent	MoA Group	Pest	Risks and Comments
CHLORANTRANILIPROLE	28	PER93850 for the control of Leaf miners	Australia: No current concerns. Permit PER93850 Expiry date: 31/12/2026 Codex MRL: 7 mg/Kg Canada: In re-evaluation
CHLORPYRIFOS	1B	PER82358 for the control of Helicoverpa armigera	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.
CYANTRANILIPROLE	28	PER93850 for the control of Leaf miners	Australia: No current concerns. Permit PER93850 Expiry date: 31/12/2026 Codex MRL: 15 mg/Kg
CYROMAZINE	17	Liriomyza species	Australia: No current concerns. Codex MRL: 4 mg/Kg EU: Not approved
EMAMECTIN	6	PER88066 for the control of Helicoverpa, Lightbrown Apple Moth & Cluster Caterpillar.	Australia: APVMA Nominated for targeted spray drift reconsideration Permit PER88066 Expiry date: 30/06/2029 EU: Approved, candidate for substitution. UK: Withdrawn (2024).
ESFENVALERATE	3A	PER82358 for the control of Helicoverpa armigera	Australia: No current concerns. Permit PER82358 Expiry date: 31/01/2026 EU: Approved, candidate for substitution.
FIPRONIL	2B	PER83203 for the control of WESTERN FLOWER THRIPS, ONION THRIPS	Australia: APVMA: Currently under review. Proposed Regulatory decision expected by April 2026. Permit PER83203 Expiry date: 30/09/2026 EU: Not approved USA: Under Registration Review (scheduled)

Active Constituent	MoA Group	Pest	Risks and Comments
FLUBENDIAMIDE	28	PER94451 for the control of Leaf miners	Australia: No current concerns. Codex MRL: 5 mg/Kg EU: Not approved UK: Withdrawn (2024).
IMIDACLOPRID	4A	PER12489 for the control of Aphids, whitefly, thrips	Australia: APVMA: Currently under review. Proposed regulatory decisions expected between Dec. 2025 to Oct. 2026. Permit PER12489 Expiry date: 31/12/2026 Codex MRL: 6 mg/Kg EU: Not approved Canada: Very few uses allowed in greenhouses and seed treatment. USA: Under Registration Review (scheduled)
INDOXACARB	22A	PER14843 for the control of Lucerne leaf roller	Australia: No current concerns. Permit PER14843 Expiry date: 30/06/2029 EU: Not approved UK: Withdrawn (2024).
ISOCYCLOSERAM	30	PER96481 for the control of LEAF MINER	Australia: No current concerns.
MALATHION	1B	PER94331 for the control of Dipteran leaf miners	Australia: The final regulatory decision was published in an APVMA Special Gazette on 2 May 2024. Labels have been varied. Products bearing previously approved labels must not be supplied after 1 May 2026. UK: Withdrawn (2025). Canada: In re-evaluation USA: Under Registration Review (scheduled)
NUCLEAR POLYHEDROSIS VIRUS OF *helicoverpa armigera*	--	Helicoverpa armigera (Corn earworm, cotton bollworm, tobacco budworm) Helicoverpa punctigera (Native budworm)	Australia: No current concerns.
NUCLEAR POLYHEDROSIS VIRUS OF *helicoverpa zea*	--	Helicoverpa	Australia: No current concerns.

Active Constituent	MoA Group	Pest	Risks and Comments
ORANGE OIL	--	Suppression: Onion thrips (*Thrips tabaci*) & Western flower thrips (*Frankliniella occidentalis*) Green peach aphid (*Myzus persicae*) & Cabbage aphid (*Brevicoryne brassicae*) Serpentine leafminer (*Liriomyza brassicae*)	Australia: No current concerns.
PERMETHRIN	3A	Helicoverpa spp., Lucerne leaf roller	Australia: APVMA nominated for reconsideration after 2029. Codex MRL: 2 mg/Kg EU: Not approved
PETROLEUM OIL	UN	Aphids, Green mirid, Green vegetable bug, Grey cluster bug, Leafhoppers, Mites, Rutherglen bug, Thrips	Australia: No current concerns. Permit PER12221 Expiry date: 30/09/2027 EU: Not approved
PIRIMICARB	1A	Aphids, Cotton aphid, Green peach aphid	Australia: No current concerns. EU: Approved, candidate for substitution. Canada: Cancelled
PYMETROZINE	9B	Aphids	Australia: APVMA nominated for reconsideration and spray drift assessment. EU: Not approved Canada: Cancelled
SPINETORAM	5	Helicoverpa. Permit PER94451 for the control of leaf miners.	Australia: No current concerns. Permit PER94451 Expiry date: 31/07/2027 Codex MRL: 6 mg/Kg EU: Not approved UK: Withdrawn (2024). Canada: In re-evaluation
SPINOSAD	5	Helicoverpa. Permit PER94331 for the control of dipteran leaf miners.	Australia: No current concerns. Permit PER94331 Expiry date: 30/04/2026 Codex MRL: 2 mg/Kg Canada: In re-evaluation

Active Constituent	MoA Group	Pest	Risks and Comments
SPIROTETRAMAT	23	Cotton aphid, Plague thrips, Tomato thrips, Western flower thrips. Permit PER88640 for the control of Liriomyza leafminers	Australia: No current concerns. Permit PER88640 Expiry date: 28/02/2026 Codex MRL: 4 mg/Kg EU: Not approved Canada: In re-evaluation
SULFOXAFLOR	4C	Green peach aphid	Australia: No current concerns. Codex MRL: 1.5 mg/Kg
TRICHLORFON	1B	Cutworms, Cabbage white butterfly, Green vegetable bug	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
BOSCALID	7	Sclerotinia rot	Australia: No current concerns. Permit PER11127 Expiry date: 31/03/2028 Canada: In re-evaluation
CHLOROTHALONIL	M5	Septoria spot, Early blight	Australia: APVMA reconsideration. Prioritised to be commenced by 2028. Codex MRL: 20 mg/Kg EU: Not approved Canada: In re-evaluation USA: Under Registration Review (scheduled)
COPPER	M1	Bacterial soft rot, Early blight, Leaf spots, Septoria spot, Soft rot	Australia: No current concerns.

Active Constituent	MoA Group	Pest	Risks and Comments
DIFENOCONAZOLE	3	Septoria spot, Early blight	Australia: APVMA nominated for reconsideration after 2029. Codex MRL: 3 mg/Kg EU: Approved, candidate for substitution. Canada: In re-evaluation
HYDROGEN PEROXIDE | PEROXYACETIC ACID	M	Cercospora Leaf Spot (Cercospora spp)	Australia: No current concerns EU: Approved
IPRODIONE	2	Sclerotinia rot	Australia: No current concerns. EU: Not approved USA: Under Registration Review (scheduled)
MANCOZEB	M3	Early blight, Leaf spots, Powdery mildew	Australia: APVMA reconsideration. Prioritised to be commenced by 2027. EU: Not approved UK: Withdrawn (2024). USA: Under Registration Review (scheduled)
METALAXYL-M + MANCOZEB	M3 + 4	Permit PER13673 for the control of Septoria spot	Australia: MANCOZEB Australia: APVMA reconsideration. Prioritised to be commenced by 2027. EU: Not approved UK: Withdrawn (2024). USA: Under Registration Review (scheduled) METALAXYL Australia: No current concerns. Codex MRL: 0.02 mg/Kg EU: Approved, candidate for substitution. Canada: In re-evaluation Permit PER13673 Expiry date: 31/07/2026

Active Constituent	MoA Group	Pest	Risks and Comments
METIRAM	M3	Early blight, Septoria Spot	Australia: APVMA reconsideration. Prioritised to be commenced by 2027. EU: Not approved Canada: Only approved for foliar applications in potato crops.
PENTHIOPYRAD	7	Early blight (Target spot, Leaf spot) (Alternaria spp.), Powdery mildew (Erysiphe spp.)	Australia: No current concerns. Codex MRL: 15 mg/Kg
PROPICONAZOLE	3	Early blight, Septoria Spot	Australia: APVMA nominated for reconsideration and spray drift assessment. Permit PER14479 Expiry date: 31/08/2029 EU: Not approved Canada: In re-evaluation USA: Under Registration Review (scheduled)
PROPINEB	M3	Septoria spot	Australia: APVMA reconsideration. Prioritised to be commenced by 2027. EU: Not approved
PYDIFLUMETOFEN | DIFENOCONAZOLE	7 + 3	Cercospora leaf spot (Cercospora apii) Septoria leaf spot (Septoria apiicola)	DIFENOCONAZOLE Australia: APVMA nominated for reconsideration after 2029. Codex MRL: 0.2 mg/Kg EU: Approved, candidate for substitution. Canada: In re-evaluation PYDIFLUMETOFEN Australia: No current concerns. EU: Pending Canada: In re-evaluation
THIRAM	M3	Anthracnose, Botrytis rot, Septoria spot	Australia: APVMA reconsideration. Prioritised to be commenced by 2027. EU: Not approved Canada: Only approved for seed treatment.
TRIFLOXYSTROBIN	11	Cercospora leaf spot (Cercospora apii) Septoria leaf spot (Septoria apiicola)	Australia: No current concerns. Permit PER14494 Expiry date: 31/08/2027 Codex MRL: 1 mg/Kg Canada: In re-evaluation

Active Constituent	MoA Group	Pest	Risks and Comments
ZINEB	M3	Early blight, Septoria Spot	Australia: APVMA reconsideration. Prioritised to be commenced by 2027. EU: Not approved Canada: Cancelled
ZIRAM	M3	Septoria spot	Australia: APVMA reconsideration. Prioritised to be commenced by 2027. EU: Approved, candidate for substitution. UK: Withdrawn (2024). Canada: Cancelled

HERBICIDES – Weed Control

ACTIVE CONSTITUENT	MoA Group	Risks and Comments
CLETHODIM	1	Australia: No current concerns.
DIQUAT	22	Australia: APVMA: Currently under review. Publication of the final regulatory decision **is now expected in Mid 2026**. EU: Not approved USA: No agricultural uses allowed. Aquatic herbicide.
FLUAZIFOP-P PRESENT AS THE BUTYL ESTER	1	Australia: APVMA Nominated for targeted spray drift reconsideration Canada: Cancelled
GLYPHOSATE	9	Australia: Nominated for targeted spray drift reconsideration USA: Under Registration Review (scheduled)
LINURON	5	Australia: No current concerns. EU: Not approved

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
PROMETRYN	5	Australia: No current concerns. Permit PER13114 Expiry date: 31/03/2027 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 (Xanthomonas 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.

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