

BRASSICA LEAFY VEGETABLES

Agrichemical Regulatory Risk Assessment

May 2025

Regulatory pressures on agrichemicals are increasing globally, with many being either restricted or withdrawn from use.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

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

The effects of the above are greater regulatory pressure placed on the use of individual agrichemicals or chemical groups. Consequently, the number of approved agrichemical options could be adversely impacted.

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

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

Blue text = new APVMA approved uses

INSECTICIDES/MITICIDES - Insect and other Pests Control

Active Constituent	MoA Group	Pest	Risks and Comments
ABAMECTIN	6	Western Flower Thrips (<i>Frankliniella occidentalis</i>) (Vegetable leafminer - PER81876 expired)	Australia: APVMA nominated for reconsideration and spray drift assessment EU: Approved Canada: In review
AFIDOPYROPEN	9D	Cabbage aphid; Cotton aphid; Currant lettuce aphid; Green peach aphid; Silverleaf (<i>Poinsettia</i>) whitefly	Australia: No current concerns. Codex MRL: 5 mg/Kg EU: Not approved UK: No registrations Canada: No current review USA: Approved
ALPHA-CYPERMETHRIN	3A	Permit PER88808 for the control of <i>Heliothis</i> , white cabbage butterfly, cluster caterpillar, cabbage moth	Australia: APVMA nominated for reconsideration Permit PER88808 Expiry date: 31/07/2026 Canada: No current review
BACILLUS THURINGIENSIS	11C	Lepidopteran larvae susceptible to <i>Bacillus thuringiensis</i> .	Australia: No current concerns EU: Under review
CHLORANTRANILIPROLE	28	Cabbage-centre grub, Cabbage cluster caterpillar, Cabbage leafminer, Cabbage white butterfly, Cluster caterpillar, Cotton bollworm, Diamondback moth, Native budworm, Soybean looper	CHLORANTRANILIPROLE Australia: No current concerns. Codex MRL: 20 mg/Kg EU: Approved UK: Approved Canada: In review
CHLORANTRANILIPROLE + THIAMETHOXAM	28 + 4A	Diamondback Moth, Cabbage White Butterfly, Native Budworm, cabbage Centre Grub, Cluster Caterpillar, Soybean Looper, Cabbage Aphid, Green Peach Aphid, Silverleaf Whitefly, Greenhouse Whitefly, Green Vegetable Bug, Western Flower Thrips, Onion Thrips. Leaf miners. Permit PER94452 for the control of <i>Liriomyza</i> species	Permit PER94452 Expiry date: 30/06/2026 CHLORANTRANILIPROLE Australia: No current concerns. Codex MRL: 20 mg/Kg EU: Approved UK: Approved Canada: In review THIAMETHOXAM Australia: APVMA: Currently under review. Proposed regulatory decisions expected between Dec. 2025 to Oct. 2026. Codex MRL: 3 mg/Kg EU: Not approved Canada: In review USA: Upcoming review

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Active Constituent	MoA Group	Pest	Risks and Comments
CHLORPYRIFOS	1B	Permit PER14583 for the control of African black beetle, False wireworms and Wireworms	Australia: The APVMA issued a final decision in 30 September 2024 Use in heavy vegetables was cancelled. Products with previously approved labels must not be possessed or used after September 30, 2025. The final decision was published in the APVMA Official Gazette on October 3, 2024 . PER14583 expires 31 JULY 2025. Codex: All Codex MRLs deleted EU: Not approved Canada: All uses cancelled 2023 USA: Upcoming review
CYROMAZINE	17	Liriomyza species, including Vegetable Leafminer; Serpentine Leafminer (PER81867)	Australia: Reviewed in 2014. No current concerns. PER81867 expires 30 September 2026 EU: Not approved Canada: No current review
DIMPROPYRIDAZ	36	Cabbage aphid; Green peach aphid	Australia: No current concerns EU: Pending approval
EMAMECTIN	6	Diamondback Moth; Heliothis; Cabbage White Butterfly; Vegetable Looper	Australia: APVMA nominated for reconsideration and for targeted spray drift reconsideration Permit PER14907 Expiry date: 31/08/2029 EU: Approved. Candidate for substitution UK: Withdrawn. Expiry date: 30/11/2024 Canada: No current review
FLUBENDIAMIDE	28	Cabbage white butterfly; Cluster caterpillar; Diamondback (Cabbage) moth; Helicoverpa; Soybean looper	Australia: No current concerns. EU: Not approved UK: Withdrawn. Expiry date: 30/11/2024 Canada: No current review USA: No registrations
IMIDACLOPRID	4A	Aphids, Whitefly and Thrips (except Western Flower Thrip)	Australia: APVMA: Currently under review. Proposed regulatory decisions expected between Dec. 2025 to Oct. 2026 . Permit PER14584 Expiry date: 31/10/2028 EU: Not approved UK: Canada: No current review USA: Upcoming review
INDOXACARB	22A	Cotton bollworm (<i>H. armigera</i>) Native budworm (<i>H. punctigera</i>)	Canada: Cancelled 2021 with all products phased out 2024 (environmental concerns). EU and UK: Not approved (approval not renewed in 2021 - environmental and safety concerns).
ISOCYCLOSERAM	30	Diamondback moth; Cabbage white butterfly; Heliothis spp. (Suppression)	Australia: No current concerns. Canada: No current review

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NUCLEAR POLYHEDROSIS VIRUS OF <i>HELICOVERPA ARMIGERA</i>		<i>H. armigera</i> ; <i>H. punctigera</i>	Australia: No current concerns. EU: Approved
PIRIMICARB	1A	Cabbage aphid Green peach aphid	Australia: No current concerns. Codex: JMPR re-evaluation scheduled 2025 EU: Approved. Candidate for substitution. UK: Approved Canada: No current review
PYMETROZINE	9B	Cotton aphid; Potato aphid	Australia: APVMA nominated for reconsideration and spray drift assessment EU: Not approved Canada: No current review. Restricted use to glasshouse only
PYRETHRINS	3A	Insects (including beneficial predators) that may be present just prior to harvest such as: Fruit fly, Rutherglen bug, Spiders	Australia: No current concerns. EU: Approved UK: Approved Canada: No current review
SPINETORAM	5	Diamondback moth, Cabbage white butterfly, Cabbage cluster caterpillar, Cabbage centre grub, Loopers Permit PER94451 for the control of Leaf miners (<i>Liriomyza</i> spp.)	Australia: No current concerns. Permit PER94451 Expiry date: 31/07/2027 Codex MRL: EU: Not approved UK: Withdrawn. Expiry date: 30/09/2024 Canada: In review
SPINOSAD	5	Diamondback moth, Cabbage white butterfly, Cabbage cluster caterpillar, Cabbage centre grub, Loopers, Heliothis, Western flower thrip. Permit PER89870 for the control of Fall Armyworm (<i>Spodoptera frugiperda</i>) Permit PER94331 for the control of Leaf miners.	Australia: Reviewed in 2014. No current concerns. Permit PER89870 Expiry date: 31/07/2025 and Permit PER94331 Expiry date: 30/04/2026 - Codex MRL: 10 mg/Kg EU: Approved UK: Approved Canada: In review
SPIROTETRAMAT	23	Green peach aphid; Grey cabbage aphid; Silverleaf whitefly	Australia: No current concerns. Codex MRL: 7 mg/Kg EU: Not approved UK: Approved Canada: In review
<i>SPODOPTERA FRUGIPERDA</i> MULTIPLE NUCLEOPOLYHEDROVIRUS		Fall Armyworm	Australia: Permit PER90820 Expiry date: 31/03/2027

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Active Constituent	MoA Group	Pest	Risks and Comments
(SFMNPV)			
SULFOXAFLO	4C	Aphids (including cabbage aphid and green peach aphid)	Australia: No current concerns. Codex MRL: 6 mg/Kg EU: Approved UK: Approved Canada: No current review
TRICHLORFON	1B	Cabbage White Butterfly, Cabbage Moth, Green Vegetable Bug, Rutherglen Bug	Australia: APVMA nominated for reconsideration EU: Not approved Canada: No current review USA: Upcoming review

FUNGICIDES – Disease Control

Active Constituent	MoA Group	Pest	Risks and Comments
AMETOCTRADIN	45	Downy mildew	Australia: No current concerns. Codex MRL: 50 mg/Kg EU: Approved UK: Approved Canada: No current review
AZOXYSTROBIN	11	Alternaria leaf spots, Sclerotinia rot, White blister	Australia: No current concerns. EU: Approved UK: Approved Canada: In review
BACILLUS AMYLOLIQUEFACIENS STRAIN QST 713	BM02	Permit PER87630 for the control of Bacterial spot / Blight (Suppression only)	Australia: Permit PER87630 Expiry date: 31/03/2027
BOSCALID	7	Sclerotinia rot	Australia: No current concerns. Codex MRL: 40 mg/Kg EU: Approved UK: Approved Canada: In review
CHLOROTHALONIL	M5	Downy Mildew , Botrytis , Alternaria , Cercospora	Australia: APVMA reconsideration. Prioritised to be commenced on 2028. Permit PER82895 Expiry date: 31/05/2030 EU: Not approved Canada: In review USA: Upcoming review
COPPER	M1	Anthraco	Australia: No current concerns. EU: Approved. Candidate for substitution. Canada: No current review

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Active Constituent	MoA Group	Pest	Risks and Comments
COPPER + METALXYL-M	M1 + 4	White Blister <i>Albugo candida</i> , Downy Mildew	<p>COPPER Australia: No current concerns. EU: Approved. Candidate for substitution. Canada: No current review </p> <p>METALAXYL-M Australia: No current concerns. EU: Approved. Candidate for substitution. UK: Approved Canada: In review</p>
CYAZOFAMID	21	Downy mildew	Australia: No current concerns. Codex MRL: 10 mg/Kg EU: Approved UK: Approved Canada: In review
CYPRODINIL + FLUDIOXONIL +	12 + 9	Grey mould and Sclerotinia rot	<p>FLUDIOXONIL Australia: No current concerns. Codex MRL: 15 mg/Kg EU: Approved. Candidate for substitution. UK: Approved Canada: No current review </p> <p>CYPRODINIL Australia: No current concerns. Codex MRL: 50 mg/Kg EU: Approved UK: Approved Canada: In review </p>
DIFENOCONAZOLE	3	Permit PER87973 for the control of Ring Spot	Australia: APVMA nominated for reconsideration Permit PER87973 Expiry date: 31/08/2025 Codex MRL: EU: Approved. Candidate for substitution. UK: Approved Canada: In review USA:
DIMETHOMORPH	40	Permit PER14985 for the use of Dimethomorph + Mancozeb for the control of Downy mildew, White Blister and Alternaria Leaf Spot	Australia: No current concerns. Permit PER14958 Expiry date: 31/10/2027 EU: Not approved UK: Approved Canada: No current review
IPRODIONE	2	Grey mould; Sclerotinia rot	Australia: No current concerns. EU: Not approved Canada: No current review USA: Upcoming review Codex: Under review.

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MANCOZEB	M3	Permit PER80538 for the control of Anthracnose and Septoria	Australia: APVMA reconsideration . Prioritised to be commenced in 2027. PER14958-Expiry date-31/5/2030 EU: Not approved UK: Withdrawn. Expiry date: 31/05/2024 Canada: No current review USA: Upcoming Codex: To be reviewed
MANCOZEB + METALAXYL	4 + 4	White blister; Downy mildew	Permit PER14045 Expiry date: 31/03/2027 MANCOZEB Australia: APVMA reconsideration . Prioritised to be commenced on 2027. EU: Not approved UK: Withdrawn. Expiry date: 31/05/2024 Canada: No current review USA: Upcoming review METALAXYL Australia: No current concerns. EU: Approved. Candidate for substitution. UK: Approved Canada: In review
MANDIPROPAMID	40	Downy mildew	Australia: No current concerns. Codex MRL: 25 mg/Kg EU: Approved UK: Approved Canada: In review USA:
Oxathiapiprolin	4	Downy mildew (<i>Bremia lactucae</i> , <i>Peronospora farinose</i>)	Australia: No current concerns.
Penthiopyrad	7	White mould (Sclerotinia stem rot) (<i>Sclerotinia</i> spp.)	Australia: No current concerns.
PHOSPHOROUS (PHOSPHONIC) ACID	P07 (33)	Permit PER 14184 for the control of Damping off and downy mildew	Australia: No current concerns. Permit PER14184 Expiry date: 31/03/2030
POTASSIUM BICARBONATE	M2	Permit PER13695 for the control of Powdery mildew	Australia: No current concerns. Permit PER13695 Expiry date: 31/07/2025
PROPAMOCARB HYDROCHLORIDE + FLUOPICOLIDE	43 + 28	Downy mildew (<i>Peronospora farinosa</i> and <i>P. parasitica</i>)	Australia: No current concerns. Fluopicolide: EU: Candidate for substitution

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Active Constituent	MoA Group	Pest	Risks and Comments
TRIADIMENOL	3	Ring Spot	Australia: APVMA nominated for reconsideration EU: Not approved UK: Canada: No current review USA:
ZINEB	M3	Cercospora leaf spot & Downy mildew	Australia: APVMA reconsideration. Prioritised to be commenced on 2027 . Permit PER10845 Expiry date: 31/03/2030 EU: Not approved Canada: No current review

HERBICIDES – Weed Control

Active Constituent*	MoA Group	Risks and Comments
CLETHODIM	1	Australia: No current concerns. Permit PER82459 Expiry date: 30/09/2026 EU: Approved UK: Approved Canada: No current review Codex: Clethodim to be reviewed in 2025.
DIQUAT (Leafy Vegetables)	22	APVMA proposed decisions published July 2024. Only uses up to 283gai/ha to be kept. Publication of the final regulatory decision is expected in December 2025 . Codex: No MRLs. EU: Not approved (withdrawn in 2018). UK: Not approved. USA: Registered (under review).
FLUAZIFOP-P	1	Australia: Permit PER81244 Expiry date: 30/04/2027 EU: Approved UK: Approved
GLYPHOSATE	9	Australia: APVMA nominated for reconsideration and for targeted spray drift reconsideration EU: Approved UK: Approved Canada: No current review USA: Review upcoming
METOLACHLOR	15	Australia: No current concerns. EU: Not approved Canada: No current review
PARAQUAT (Leafy Vegetables)	22	APVMA proposed decisions published July 2024. Only uses up to 231gai/ha to be kept. Publication of the final regulatory decision is expected in December 2025 . Codex: MRL for Leafy vegetables - 0.07 mg/Kg. EU: Not approved (withdrawn in 2018). UK: Not approved. USA: Registered (under review).

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PENDIMETHALIN	3	Australia: No current concerns. Codex MRL: 0.3 mg/Kg EU: Approved. Candidate for substitution. UK: Approved Canada: In review USA: Upcoming review
PROPACHLOR	15	Australia: No current concerns. Permit PER12008 Expiry date: 30/11/2025 EU: Not approved

* Chlorthal-dimethyl registrations cancelled by the APVMA October 9, 2024 due to significant toxicological concerns. No phase out period applies. No use is allowed.

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