

BEETROOT

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Regulatory pressures on agrichemicals are increasing globally, with many being either restricted or withdrawn from use.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 **beetroot** 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
BACILLUS THURINGIENSIS	11C	Lepidopteran larvae susceptible to <i>Bacillus thuringiensis</i> .	Australia: No current concerns EU: Under review
CARBARYL	1A	Armyworm; Budworm/Helicoverpa; Cabbage white butterfly; Cutworms; Diamondback moth; Earwigs; Green vegetable bug; Leaf eating Ladybirds; Potato moth; Pumpkin beetle; Rutherglen bugs; Vegetable weevil; Wingless grasshopper.	Australia: No current concerns (MRL 0.5mg/kg). Codex MRL: 0.1 mg/Kg (under review, CCPR55 decided to maintain all existing CXLs for carbaryl for one year) EU: Not approved Canada: In review USA: Upcoming
CHLORPYRIFOS	1B	Black field cricket; Cutworms; Earwigs; False wire worm; Field crickets; Mole crickets; Spotted vegetable weevil; Vegetable weevil; Wingless grasshopper; Leafminer species; Webworms	Australia: The APVMA issued a final decision on 30 September 2024. Use in beetroot 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 . 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
DIAZINON	1B	No uses approved in Australia	Australia: APVMA made a final decision on 10 September 2024. Agricultural uses were not supported during the review. NO use of cancelled labels after 10 September 2024. Publication of Final Decision . Codex: All MRLs deleted EU: Not approved Canada: No current review USA: Upcoming

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DIMETHOATE	1B	Leafminer flies; Aphids; Green vegetable bug; Jassids/Leafhoppers; Mites; Red-legged earth mite; Thrips; Wingless grasshopper	Australia: APVMA reconsideration . Prioritised to be commenced by 2029. EU: Not approved Canada: In review USA: Upcoming
EMAMECTIN	6	Budworm/Helicoverpa; Cabbage white butterfly; Cluster caterpillar; Diamondback moth; Loopers	Australia: APVMA nominated for reconsideration AND for targeted spray drift reconsideration EU: Approved EU: Candidate for substitution UK: Withdrawn. Expiry date: 30/11/2024 Canada: No current review
FLUAZAINDOLIZINE	N-UN	Root-knot nematodes	Australia: No current concerns. EU: Pending Canada: No current review
FLUBENDIAMIDE	28	Budworm/Helicoverpa; Cabbage white butterfly; Cluster caterpillar; Diamondback moth; Potato moth	Australia: No current concerns. EU: Not approved UK: Withdrawn. Expiry date: 30/11/2024 Canada: No current review USA: No registrations
IMIDACLOPRID	4A	Permit PER81260 for the control of Aphids & Thrips	Australia: APVMA: Currently under review. Proposed regulatory decisions expected between Dec. 2025 to Oct. 2026. PER81260-Expiry date-30/06/2027 Codex MRL: 0.5 mg/Kg EU: Not approved Canada: No current review USA: Upcoming
LAMBDA-CYHALOTHRIN	3A	Permit PER11949 for the control of Onion thrips; Plague thrips; Rutherglen bug; Vegetable Loopers; Vegetable weevil	Australia: No current concerns. PER11949-Expiry date-30/11/2029 EU: Approved UK: Approved Canada: No current review
METHOMYL	1A	Helicoverpa spp. Cucumber moth Cluster caterpillar Loopers Webworm Rutherglen bug Thrips including WFT	Australia: APVMA nominated for reconsideration 1ST quarter 2026
SPODOPTERA FRUGIPERDA NPV	UNM	Permits PER91477/PER90820 for the control of Fall armyworm	Australia: No current concerns. PER91477/PER90820 - Expiry date 31/03/2027
PIRIMICARB	1A	Green peach aphid	Australia: No current concerns. Codex MRL: 0.05 mg/Kg EU: Approved Candidate for substitution UK: Approved Canada: No current review USA: No registrations Codex: JMPR re-evaluation scheduled for periodic review September 2025
PROPARGITE	12C	Mites	Australia: APVMA nominated for reconsideration 2029 EU/UK: No authorisations USA: Under review

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PYRIPROXYFEN	7C	Ants	Australia: No current concerns.
PYMETROZINE	9B	Green peach aphid; Potato aphid	Australia: APVMA nominated for reconsideration and spray drift assessment EU: Not approved Canada: No current review
PYRETHRINS	3A	Ants, aphids, caterpillars, leaf hoppers, whitefly	Australia: No current concerns. Canada: Under review
SPINETORAM	5	Budworm/Helicoverpa; Lightbrown apple moth; Loopers; Potato moth. Leaf miners (<i>Liriomyza</i> spp.) PER94451 for Vegetable leaf miner; Pea leaf miner/Serpentine leaf miner; American serpentine leaf miner.	Australia: No current concerns. PER94451-Expiry date-31/07/2027 EU: Not approved UK: Withdrawn. Expiry date: 30/09/2024 Canada: In review
SPINOSAD	5	Budworm/Helicoverpa; Cabbage centre grub; Cabbage white butterfly; Cluster caterpillar; Cucumber moth; Lightbrown apple moth; Loopers; Potato moth; Western flower thrips. PER94331 for Leaf miners (<i>Liriomyza</i> spp.)	Australia: Reviewed in 2014. No current concerns. PER94331-Expiry date-30/04/2026 EU: Approved UK: Approved Canada: In review
SULFOXAFLOX	4C	Green peach aphid; Tomato/potato psyllid	Australia: No current concerns. 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 after 2029. Codex: No MRLs EU: Not approved Canada: No current review USA: Review upcoming

OTHER PESTS

CHLOROPICRIN + 1,3-DICHLOROPROPENE	88+-	Nematodes	EU/UK: No authorisations
FLUAZAINDOLIZINE	N-UN	Root Knot nematodes	EU: Pending
IRON EDTA COMPLEX		Slugs and snails	
METALDEHYDE		Slugs and snails	UK: Not authorised

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FUNGICIDES – Disease Control

Active Constituent	MoA Group	Pest	Risks and Comments
AMETOCTRADIN + DIMETHOMORPH	45 + 40	Downy mildew	<p>AMETOCTRADIN Australia: No current concerns. EU: Approved UK: Approved Canada: No current review </p> <p>DIMETHOMORPH Australia: No current concerns EU: Not approved UK: Approved Canada: No current review </p>
AZOXYSTROBIN + METALAXYL-M	11 + 4	Permit PER90595 for the control of Damping off / Pythium; Rhizoctonia.	<p>PER90595-Expiry date-31/01/2029</p> <p>AZOXYSTROBIN Australia: No current concerns. Codex MRL: 1 mg/Kg EU: Approved UK: Approved Canada: In review </p> <p>METALAXYL Australia: No current concerns. EU: Approved Candidate for substitution (Metalaxyl-M Restricted use approval) UK: Approved Canada: In review </p>
BOSCALID	7	Sclerotinia rot	Australia: No current concerns. Codex MRL: 2 mg/Kg EU: Approved UK: Approved Canada: In review
CHLOROTHALONIL	M5	Permit PER82895 for the control of Alternaria spp. Botrytis spp. Cercospora Leaf Spot (<i>Cercospora beticola</i>); Phoma Leaf Spot (<i>Phoma betae</i>)	Australia: APVMA reconsideration . Prioritised to be commenced in 2028. PER82895-Expiry date-31/05/2030 Codex MRL: 0.3 mg/Kg EU: Not approved Canada: In review. Cancellation of uses proposed USA: Review upcoming
COPPER	M1	Downy mildew; Rust	Australia: No current concerns. EU: Approved Candidate for substitution Canada: No current review
DIFENOCONAZOLE	3	Alternaria leaf spot; Leaf spot	Australia: APVMA nominated for reconsideration EU: Approved Candidate for substitution UK: Approved Canada: In review USA: Review upcoming

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Active Constituent	MoA Group	Pest	Risks and Comments
DIMETHOMORPH	40	Permit PER14958 for the control of Downy mildew and Alternaria Leaf Spots (not for protected cropping situations).	Australia: No current concerns. PER14958 expires 31/10/2027 EU: Not approved UK: Approved Canada: No current review
FLUDIOXONIL	12	Rhizoctonia.	Australia: No current concerns. EU: Approved, candidate for substitution UK: Approved Canada: No current review USA: No current review
IPRODIONE	2	Permit PER81589 for the control of Alternaria leaf spot; Sclerotinia Rot; Grey mould (PER81589)	Australia: PER81589-Expiry date-30/06/2026 EU: Not approved Canada: No current review USA: Upcoming
MANCOZEB	M3	Alternaria leaf spot; Cercospora leaf spot; Downy mildew; Leaf spot; Powdery mildew; Rust. Permit PER14958 for the control of Downy mildew and Alternaria Leaf Spots (not for protected cropping situations).	Australia: APVMA reconsideration . Prioritised to be commenced in 2027. PER14958-Expiry date-31/10/2027 EU: Not approved UK: Withdrawn. Expiry date: 31/05/2024 Canada: No current review USA: Upcoming Codex: To be reviewed
MANCOZEB + METALAXYL	M3 + 4	Permit PER14045 for the control of Downy mildew and Alternaria leaf spots.	PER14045-Expiry date-31/03/2027 MANCOZEB Australia: APVMA reconsideration . Prioritised to be commenced in 2027. EU: Not approved UK: Withdrawn. Expiry date: 31/05/2024 Canada: No current review USA: Upcoming Codex: To be reviewed METALAXYL Australia: No current concerns. EU: Approved Candidate for substitution (Metalaxyl-M Restricted use approval) UK: Approved Canada: In review
METALAXYL / METALAXYL-M	4	Damping off / Pythium; Downy mildew	Australia: No current concerns. EU: Approved Candidate for substitution (Metalaxyl-M Restricted use approval) UK: Approved Canada: In review

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Active Constituent	MoA Group	Pest	Risks and Comments
PENTHIOPYRAD	7	Alternaria leaf spot; Powdery mildew	Australia: No current concerns. EU: Approved UK: Approved Canada: No current review
PHOSPHOROUS ACID AND SALTS	P07 (33)	Permit PER14184 for the control of Damping off and downy mildew	Australia: No current concerns. PER14184-Expiry date-31/03/2030 Canada: In review
PROPICONAZOLE	3	Leaf Spot (<i>Cercospora</i> spp.)	Australia: APVMA nominated for reconsideration and spray drift assessment PER14479-Expiry date-31/08/2029 EU: Not approved Canada: In review USA: Upcoming
PYDIFLUMETOFEN	7	Early blight (target spot, leaf spot) (<i>Alternaria</i> spp.) Powdery mildew (<i>Erysiphe</i> spp., <i>Oidium</i> spp.) <i>Cercospora</i> leaf spot (<i>Cercospora</i> spp.)	Australia: No current concerns. EU: Pending UK: Approved Canada: In review
TEBUCONAZOLE	3	Sclerotinia Rot (<i>Sclerotinia</i> species) PER14479-Expiry date 31/08/2029 for Leaf Spot (<i>Cercospora</i> spp.)	Australia: APVMA: Removed from nomination list - maintain watching brief EU: Approved UK: Approved Canada: In review USA: Upcoming
TOLCLOFOS-METHYL	14	Rhizoctonia	Australia: No current concerns. EU: Approved UK: Approved
TRIFLOXYSTROBIN	11	Alternaria leaf spot	Australia: No current concerns. PER14891-Expiry date-30/06/2029 EU: Approved UK: Approved Canada: In review
ZINEB	M3	<i>Cercospora</i> leaf spot	Australia: APVMA reconsideration . Prioritised to be commenced in 2027. No Codex MRLS. EU/UK & USA: No authorisation in place

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HERBICIDES – Weed Control

Active Constituent	MoA Group	Risks and Comments
CLETHODIM	1	Australia: No current concerns. EU: Approved UK: Approved Canada: No current review
DIQUAT (Root & Tuber 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).
ETHOFUMESATE	15	Australia: No current concerns EU: Approved UK: Approved Canada: In review
GLYPHOSATE	9	Australia: APVMA nominated for reconsideration and for targeted spray drift reconsideration EU: Approved UK: Approved Canada: No current review USA: Review upcoming
PARAQUAT (Root & Tuber 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 Root and tuber vegetables - 0.05 mg/Kg. EU: Not approved (withdrawn in 2018). UK: Not approved. USA: Registered (under review).
PHENMEDIPHAM	5	Australia: No current concerns. EU: Approved UK: Approved Canada: No current review
PROPACHLOR	15	Australia: No current concerns. EU: Not approved
QUIZALOFOP-P	1	Australia: No current concerns EU: Approved
CHLORIDAZON	5	Australia: No current concerns. PER92389-Expiry date-31/08/2025 EU: Not approved
SETHOXYDIM	1	Australia: No current concerns. EU: Not approved Canada: No current review

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