

Eggplant Agrichemical Regulatory Risk Assessment

September 2023

Regulatory pressures on agrichemicals are increasing globally, with many being either restricted or withdrawn from use.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

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

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

To assist strategic planning, with respect to future pest management options, the following tables have been developed to highlight the regulatory threats to agrichemicals currently approved for the management of the pests and diseases in eggplants.

Eggplant Agrichemical Regulatory Risk Assessment

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

| Active Constituents | Chemical Group | Problem | Comments |
|--|----------------|--|--|
| INSECT AND OTHER PESTS | | | |
| Abamectin | 6 | Root-knot nematodes | APVMA: Nominated for spray drift label review |
| | | Two-spotted (Red spider) mite | Canada: Some uses amended |
| | | Western flower thrips | EU: Use restricted to permanent greenhouses |
| | | Vegetable leafminer (<i>Liriomyza spp.</i>) (PER81876) | |
| | | Tomato potato Psyllid (PER84229) | |
| Afidopyropen | 9D | Cabbage aphid | EU: No authorisations |
| | | Cotton aphid | |
| | | Currant lettuce aphid | |
| | | Green peach aphid | |
| | | Silver leaf whitefly | |
| Alpha-cypermethrin | 3A | Queensland fruit fly(PER80099) | EU: No authorisation UK: No authorisation |
| <i>Bacillus thuringiensis israeliensis</i> | 11A | Fungus gnats(PER14694) | EU: Under review |
| Bifenazate | 20D | Bryobia mite | Canada: Review initiated |
| | | Red tomato spider mite | EU: Use restricted to non-edible crops in permanent greenhouses. |
| | | Two-spotted (Red spider) mite (PER82341) | |
| Buprofezin | 16 | Cotton (Sweet Potato) whitefly(PER82467) | EU: MRLs set to limit of quantification |
| | | Greenhouse whitefly(PER82467) | |
| | | Silver leaf whitefly(PER82467) | |

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| Active Constituents | Chemical Group | Problem | Comments |
|------------------------------------|----------------|--------------------------|---|
| Chlorantraniliprole | 28 | Eggfruit caterpillar | |
| | | Helicoverpa | |
| | | Potato moth (Leafminer) | |
| Chlorantraniliprole + thiamethoxam | 4A + 28 | Silver leaf whitefly | Thiamethoxam APVMA: Under review |
| | | Cluster caterpillar | Canada: Some field uses cancelled or amended |
| | | Green peach aphid | EU: Not authorised |
| | | Greenhouse whitefly | USA: Re-registration with new risk mitigation measures |
| | | Helicoverpa | |
| | | Potato moth (Leafminer) | |
| | | Tomato thrips | |
| | | Western flower thrips | |
| Chlorpyrifos | 1B | Black field cricket | APVMA: Under review. |
| | | Cutworms | Codex: All Codex MRLs deleted |
| | | Field crickets | Canada: Cancellation of all uses. |
| | | Mole crickets | EU: No authorisation in place |
| | | Spotted vegetable weevil | USA: EPA decision to cancel use on food crops |
| | | Vegetable weevil | |
| | | Wingless grasshopper | |
| Clothianidin | 4A | Mediterranean fruit fly | APVMA: Under review |
| | | Queensland fruit fly | Canada: Field uses cancelled or amended EU: Not authorised USA: Re-registration with new risk mitigation measures |

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|---------------------|----------------|--|---|
| Cyantraniliprole | 28 | Green peach aphid | |
| | | Helicoverpa | |
| | | Potato moth (Leafminer) | |
| | | Silver leaf whitefly | |
| | | Tomato thrips | |
| | | Tomato potato psyllid (PER84805) | |
| | | Western flower thrips | |
| | | Vegetable leafminer (<i>Liriomyza spp.</i>) (PER90387) | |
| Cyromazine | 17 | Liriomyza spp. (PER81867) | EU: No authorisation |
| Diazinon | 1B | Cutworms | APVMA: Under review EU: No authorisation in place Codex: Withdrawal of Codex MRLs recommended |
| Dimethoate | 1B | Aphids | Codex: No MRLs. |
| | | Green vegetable bug | EU: Not authorised |
| | | Jassids | |
| | | Leafhoppers | |
| | | Mites | |
| | | Thrips | |
| | | Wingless grasshopper | |
| | | Mediterranean fruit fly (PER12506) | |
| | | Queensland fruit fly (PER12506) | |
| Dimpropridaz | 36 | Greenhouse whitefly | Codex: Evaluation for MRLs scheduled for 2025 |
| | | Silverleaf whitefly | EU: Authorisation pending |
| Emamectin benzoate | 6 | Helicoverpa | EU: Candidate for substitution |
| | | Cluster caterpillar | |
| Etoxazole | 10B | Two-spotted (Red spider) mite | EU: Only uses on greenhouse ornamentals approved & Candidate for substitution |
| Flonicamid | 29 | Green peach aphid(PER90346) | |
| Fluazaindolizine | N-UN | Root-knot nematodes | EU: Pending |
| Flubendiamide | 28 | Helicoverpa | |
| | | Potato moth (Leafminer) | |
| Fluensulfone | 5 | Root-knot nematodes | EU: Not authorised |

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| Flupyradifurone | 4D | Cabbage aphid | EU: Under review |
| | | Green peach aphid | |
| | | Greenhouse whitefly | |
| | | Silver leaf whitefly | |
| Helicoverpa NPV | 31 | Helicoverpa | |
| Hexythiazox | 10A | Broad mite(PER14765-expires 30/9/23) | |
| | | Tomato Red spider mite(PER14765-expires 30/9/23) | |
| | | Tomato russet mite(PER14765-expires 30/9/23) | |
| | | Two-spotted (Red spider) mite(PER14765-expires 30/9/23) | |
| Imidacloprid | 4A | Green peach aphid | APVMA: Under review |
| | | Melon thrips | Canada: Field uses cancelled or amended |
| | | Silver leaf whitefly | EU: No authorisation USA: Re-registration with new risk mitigation measures |
| Indoxacarb | 22A | Helicoverpa | Canada: No authorisations |
| | | Potato moth (Leafminer) | EU: No authorisation UK: Proposed non-renewal |
| Isocycloseram | 30 | Two-spotted mite | EU: No authorisation |
| | | Broad mite | |
| | | Thrips (Suppression) | |
| | | Heliothis (Suppression) | |
| Methomyl | 1A | Cluster caterpillar (PER82428) | APVMA: nominated for review |
| | | Cucumber moth (PER82428) | Canada: Re-evaluation completed. Majority of uses removed |
| | | Helicoverpa (PER82428) | EU: No authorisations in place |
| | | Loopers (PER82428) | USA: Under review |
| | | Rutherglen bug (PER82428) | |
| | | Thrips (PER82428) | |
| | | Webworms(PER82428) | |
| | | Western flower thrips (PER82428) | |

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| Methoxyfenozide | 18 | Cluster caterpillar | EU: Proposed restricted authorisation & Candidate for substitution |
| | | Helicoverpa | |
| | | Tomato grub | |
| Milbemectin | 6 | Two-spotted (Red spider) mite | |
| Petroleum oil | - | Greenhouse whitefly | |
| | | Silver leaf whitefly | |
| | | Aphids(PER12221) | |
| | | Green mirid(PER12221) | |
| | | Green vegetable bug(PER12221) | |
| | | Grey cluster bug(PER12221) | |
| | | Leafhoppers(PER12221) | |
| | | Mites(PER12221) | |
| | | Rutherglen bug(PER12221) | |
| | | Thrips(PER12221) | |
| Phorate (PER8930) | 1B | Aphids(PER8930) | APVMA: nominated for review |
| | | Jassids(PER8930) | Canada: Under review |
| | | Mites(PER8930) | EU: No authorisation in place |
| | | Thrips(PER8930) | |
| Pirimicarb | 1A | Aphids | Codex: JMPR re-evaluation scheduled EU: Candidate for substitution |
| Pymetrozine | 9B | Green peach aphid | Canada: Restricted use to glasshouses only |
| | | Greenhouse whitefly | Codex: No registrant support |
| | | Potato aphid | EU: Not authorised |
| | | Silver leaf whitefly | |
| Pyriproxyfen | 7C | Greenhouse whitefly | |
| | | Silver leaf whitefly | |

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| Spinetoram | 5 | Helicoverpa | |
| | | Potato moth (Leafminer) | |
| | | Tomato grub | |
| | | Western flower thrips | |
| | | Melon thrips(PER14186) | |
| | | Vegetable leafminer (<i>Liriomyza spp.</i>) (PER91155) | |
| Spinosad | 5 | Helicoverpa | |
| | | Potato moth (Leafminer) | |
| | | Western flower thrips | |
| | | Fall armyworm(PER89870) | |
| | | Vegetable leafminer (<i>Liriomyza spp.</i>) (PER90928) | |
| Spirotetramat | 23 | Green peach aphid | |
| | | Silver leaf whitefly | |
| | | Tomato potato Psyllid(PER84245) | |
| | | Vegetable leafminer (<i>Liriomyza spp.</i>) (PER88640) | |
| Spodoptera (NPV) | 31 | Fall armyworm(PER90820) | |
| Sulfoxaflor | 4C | Green peach aphid | USA: Pollinator concerns |
| | | Greenhouse whitefly | EU: Restricted to permanent glasshouses only |
| | | Rutherglen bug | |
| | | Tomato potato Psyllid | |
| Trichlorfon | 1B | Green vegetable bug | APVMA: nominated for review |
| | | Rutherglen bug | Codex: No MRLs |
| | | Mediterranean fruit fly(PER80717) | EU: No authorisations |
| | | Queensland fruit fly(PER80717) | USA: No MRLs |

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|---------------------------------------|----------------|----------------------------------|--|
| DISEASES | | | |
| <i>Aureobasidium pullulans</i> | NC | Grey mould | |
| <i>Bacillus amyloquefaciens</i> | NC | Botrytis grey mould (PER88032) | Canada: Review completed. Continued use |
| | | Early blight (PER88032) | |
| | | Powdery mildew (PER88032) | |
| | | Bacterial spot (PER88032) | |
| Boscalid | 7 | Target spot (Early blight) | Canada: Under review |
| Bupirimate | 8 | Powdery mildew | |
| Chlorothalonil | M5 | Alternaria spot(PER82895) | APVMA: nominated for review |
| | | Downy mildew(PER82895) | Canada: Cancellation of uses proposed |
| | | Grey leaf spot(PER82895) | EU: No authorisation in place |
| | | Grey mould(PER82895) | USA: Under review |
| Copper | M1 | Bacterial canker(PER14038) | EU: Candidates for substitution |
| | | Bacterial speck(PER14038) | |
| | | Bacterial spot(PER14038) | |
| Hydrogen peroxide + peroxyacetic acid | M | Powdery mildew | |
| Iodine | M | Bactericide | |
| | | Fungi | |
| Iprodione | 2 | Grey mould(PER80910) | Canada: Majority of food crop uses deleted Codex: Under review EU: No authorisation in place USA: Proposed deletion or restriction of uses |
| Mancozeb | M3 | Alternaria leaf spots (PER14593) | APVMA: nominated for review |
| | | Anthracnose (PER14593) | Canada: Many uses cancelled |
| | | Downy mildew (PER14593) | Codex: To be reviewed 2024/25 |
| | | Target spot (Early blight) | EU: Authorisation not renewed |
| Metiram | M3 | Alternaria leaf spots | APVMA: nominated for review Canada: Proposed cancelling of foliar uses other than potato Codex: To be reviewed 2024/25 EU: Under review |

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|---------------------------------|----------------|--|--|
| Metiram + pyraclostrobin | 11 + M3 | Target spot (Early blight) | Metiram APVMA: nominated for review Canada: All foliar uses, other than potato, cancelled Codex: To be reviewed 2024/25 EU: Under review |
| Penthiopyrad | 7 | Grey mould | |
| | | Powdery mildew | |
| | | Target spot (Early blight) | |
| Phosphorous acid | 33 | Phytophthora soil fungus (Dieback) (PER81408) | |
| Pydiflumetofen + difenoconazole | 7 + 3 | Cercospora leaf spot | Difenoconazole: |
| | | Early blight | APVMA: nominated for review |
| | | Powdery mildew | EU: Candidate for substitution USA: Under review Pydiflumetofen: EU: Authorisation pending |
| Triadimenol | 3 | Powdery mildew | APVMA: nominated for review Canada : No authorisation in place EU: No authorisation in place USA: Registration cancelled |
| Zineb | M3 | Target spot (Early blight) | APVMA: nominated for review |
| | | Anthraco nose(PER14839) | Codex: To be reviewed 2024/25 |
| | | Late (Irish) blight(PER14839) | EU: No authorisation in place |

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| Active Constituents | Chemical Group | Comments |
|--------------------------------|----------------|---|
| WEEDS | | |
| Clethodim (PER82459) | 1 | Codex: MRLs proposed for deletion |
| Diquat | 22 | APVMA: Currently under review EU: No authorisation in place |
| Fluazifop-P (PER82556) | 1 | |
| Glyphosate | 9 | EU: Under review Ongoing issues internationally |
| Paraquat | 22 | APVMA: Currently under review Canada: Review initiated EU: No authorisation in place Rotterdam Convention - nomination |
| Trifluralin (PER12823) | 3 | EU: No authorisation in place |
| PLANT GROWTH REGULATORS | | |
| Paclobutrazol | | EU: Candidate for substitution |

Funding statement: MT20007 - Regulatory Support & Response Co-ordination. This *multi-industry* project has been funded by Hort Innovation, using *industry research and development levies* and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

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