

Choko Agrichemical Regulatory Risk Assessment

September 2023

Regulatory pressures on farm chemicals are increasing globally, with many being either restricted or withdrawn from use. For older compounds 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 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 prohibit its use in the exporting country 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 chemicals or chemical groups. As a consequence it is possible that the ability to use of a number of currently approved farm chemicals could be adversely impacted.

To assist strategic planning with respect to future pest management needs the following tables have been developed to highlight the regulatory threats to the chemicals currently approved for the management of the pests and diseases in choko as well as current initiatives aimed at addressing identified pest management deficiencies.

Choko Agrichemical Regulatory Risk Assessment

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 Canada: Some uses amended, others cancelled EU: Use restricted to permanent greenhouses
		Two-spotted (Red spider) mite	
		Vegetable leafminer (PER81876)	
Afidopyropen	9D	Cabbage aphid	EU: No authorisations
		Cotton / melon aphid	
		Currant lettuce aphid	
		Green peach aphid	
		Silverleaf (Poinsettia) whitefly	
Alpha-cypermethrin	3A	Cucumber fly	EU: No authorisation UK: No authorisation
Beta-cyfluthrin	3A	Cucumber moth	EU: No authorisation
		Helicoverpa	
Bifenazate	20	Bryobia mite	Canada: Review initiated EU: Use restricted to non-edible crops in permanent greenhouses
		Two-spotted (Red spider) mite	
Bifenthrin	3A	Brown marmorated stink bug	Canada: Not authorised EU: Not authorised
		Caterpillars	
		Cucumber moth	
		Helicoverpa	
		Mites	
		Moths	
		Silverleaf (Poinsettia) whitefly	
		Whiteflies	
		Yellow spotted stink bug	

Active Constituents	Chemical Group	Problem	Comments
Buprofezin	16	Cotton (Sweet Potato) whitefly (PER82467)	EU: MRLs set to limit of quantification
		Greenhouse whitefly(PER82467)	
		Silverleaf (Poinsettia) whitefly(PER82467)	
Carbaryl	1A	28-spotted potato ladybird	Canada: Reviewed, large number of uses deleted Codex: Review scheduled, support uncertain EU: Authorisation not renewed USA: Under review
		Armyworms	
		Cucurbit stem borer	
		Cutworms	
		European earwig	
		Green vegetable bug	
		Helicoverpa	
		Leaf eating ladybirds	
		Potato moth (Leafminer)	
		Pumpkin beetle	
		Rutherglen bug	
Wingless grasshopper			
Chlorantraniliprole	28	Cucumber moth	
		Helicoverpa	
Chlorpyrifos	1B	Ants	APVMA: Under review. Codex: All Codex MRLs deleted Canada: Cancellation of all uses. EU: No authorisation in place USA: EPA decision to cancel use on food crops
		Australian plague locust	
		Field crickets / Mole crickets	
		Migratory locust	
		Spur-throated locust	
		Whiteflies	
		Yellow spotted stink bug	

Active Constituents	Chemical Group	Problem	Comments
Clothianidin	4A	Cucumber fly (PER80101-Expires 30/9/23)	APVMA: Under review Canada: Field uses cancelled or amended EU: Not authorised USA: Re-registration with new risk mitigation measures
Cyanogen (ethanedinitrile)	-	Root-knot nematodes	
Cyantraniliprole	28	Cotton / melon aphid	
		Cucumber moth	
		Helicoverpa	
		Silverleaf (Poinsettia) whitefly	
		Western flower thrips	
		Vegetable leafminer (PER90387)	
Cyromazine	17	Liriomyza species (PER81867)	EU: No authorisation in place
Diafenthiuron + cyantraniliprole	12A + 28	Cotton / melon aphid	Diafenthiuron Codex: No MRLs EU: No authorisation i
		Cucumber moth	
		Green peach aphid	
		Helicoverpa	
		Melon thrips	
		Plague thrips	
		Silverleaf (Poinsettia) whitefly	
		Tomato thrips	
		Two-spotted (Red spider) mite	
		Western flower thrips	
Diazinon	1B	Caterpillars	APVMA: Under review EU: No authorisation in place Codex: JMPR recommended withdrawal of Codex MRLs
		Cutworms	
		Thrips	

Active Constituents	Chemical Group	Problem	Comments
Emamectin benzoate	6	Cluster caterpillar	EU: Candidate for substitution
		Cucumber moth	
		Helicoverpa	
		Tomato grub	
Etoazole	10B	Two-spotted (Red spider) mite	EU: Only use in greenhouse ornamentals approved & Candidate for substitution
Flonicamid	29	Cotton / melon aphid	
		Green peach aphid	
		Silverleaf (Poinsettia) whitefly	
Fluazaindolizine	N-UN	Root-knot nematodes	EU: Authorisation pending
Flubendiamide	28	Cluster caterpillar	
		Helicoverpa	
Fluensulfone	-	Root-knot nematodes	EU: No authorisations
Flupyradifurone	4D	Cotton / melon aphid	EU: Under review
		Green peach aphid	
		Greenhouse whitefly	
		Silverleaf (Poinsettia) whitefly	
Helicoverpa NPV	31	Helicoverpa	
Hexythiazox	10A	Broad mite	
		Tomato russet mite	
		Two-spotted (Red spider) mite	
Imidacloprid	4A	Green peach aphid	APVMA: Under review Canada: Field uses cancelled or amended EU: No authorisation USA: Re-registration with new risk mitigation measures
		Silverleaf (Poinsettia) whitefly	

Active Constituents	Chemical Group	Problem	Comments
Isocycloseram	30	Two-spotted mites	EU: No authorisation
		Broad mite (Suppression)	
		Bean red spider mite (Suppression)	
		Cucumber moth	
		Thrips (Suppression)	
		Helicoverpa spp (Suppression)	
Malathion/Maldison	1B	28-spotted potato ladybird	APVMA: Under review Codex: Re-evaluation scheduled for 2025/26 EU: Restricted use to permanent greenhouses
		Aphids	
		Green vegetable bug	
		Jassids	
		Leafhoppers	
		Pumpkin beetle	
		Redlegged earth mite	
		Rutherglen bug	
Spur-throated locust			
Methomyl	1A	Cluster caterpillar	APVMA: nominated for review Canada: Re-evaluation completed. Majority of uses removed EU: No authorisations in place USA: Under review
		Cucumber moth	
		Loopers	
		Rutherglen bug	
		Thrips	
		Webworms	
		Western flower thrips	
		Helicoverpa (PER82428)	

Active Constituents	Chemical Group	Problem	Comments
Petroleum oil	UN	Aphids	
		Greenhouse whitefly	
		Leafhoppers	
		Mites	
		Silverleaf (Poinsettia) whitefly	
		Thrips	
Pirimicarb	1A	Aphids	Codex: JMPR re-evaluation scheduled EU: Candidate for substitution
Pymetrozine	9B	Cotton / melon aphid	Canada: Restricted use to glasshouses only Codex: No registrant support EU: Not authorised
		Cowpea aphid	
		Green peach aphid	
		Greenhouse whitefly	
		Potato aphid	
		Silverleaf (Poinsettia) whitefly	
Pyrethrins	3A	Ants	Canada: Under review Codex: Under review
		Cabbage white butterfly	
		Caterpillars	
		Earwig	
		Flies	
		Helicoverpa	
		Leafhoppers	
		Scale insects	
		Thrips	
		Two-spotted (Red spider) mite	
		Whiteflies	
		Aphids	

Active Constituents	Chemical Group	Problem	Comments
Pyriproxyfen	7C	Silverleaf (Poinsettia) whitefly	
Spinetoram	5	Cabbage white butterfly	
		Caterpillars	
		Cucumber moth	
		Helicoverpa	
		Loopers	
		Melon thrips	
		Western flower thrips	
Spinosad	5	Cucumber moth	
		Helicoverpa	
		Western flower thrips	
		Fall armyworm(PER89870)	
Spirotetramat	23	Cotton / melon aphid	
		Green peach aphid	
		Silverleaf (Poinsettia) whitefly	
Sulfoxaflor	4C	Cotton / melon aphid	USA: Pollinator concerns EU: Restricted to permanent glasshouses only
		Green peach aphid	
		Greenhouse whitefly	
Trichlorfon	1B	Cutworms	APVMA: nominated for review Codex: No MRLs EU: No authorisations USA: No MRLs

Active Constituents	Chemical Group	Problem	Comment
DISEASES			
Ametoctradin + dimethomorph	45 + 40	Downy mildew	<u>Dimethomorph</u> EU: Under review
<i>Aureobasidium pullulans</i>	NC	Botrytis/Grey mould	
		Sclerotinia	
Azoxystrobin	11	Downy mildew	Canada: Review proposed
		Gummy stem blight	
		Powdery mildew	
Benalaxyl	4	Gummy stem blight	EU: No authorisation (benalaxyl-M approved)
		Downy mildew	
Boscalid	7	Powdery mildew	Canada: Under review
Bupirimate	8	Powdery mildew	
Chlorothalonil	M5	Alternaria leaf blight	APVMA: nominated for review Canada: Cancellation of uses proposed EU: No authorisation in place USA: Under review
		Anthracnose	
		Downy mildew	
		Gummy stem blight	
		Powdery mildew	
		Rhizoctonia ground rot	
		Target leafspot	

Active Constituents	Chemical Group	Problem	Comment
Copper	M1	Angular leaf spot	EU: Candidates for substitution
		Anthracnose	
		Bacterial spot	
		Downy mildew	
		Gummy stem blight	
		Late (Irish) blight	
		Leaf diseases/spots	
		Powdery mildew	
		Rust	
		Septoria leaf spot	
		Target spot (Early blight)	
Cyflufenamid	U6	Powdery mildew	
Dimethomorph	40	Alternaria leaf blight	EU: Under review
		Anthracnose	
		Downy mildew	
		Gummy stem blight	
		Septoria spot	
Ethanedinitrile	-	Damping off	EU: No authorisation in place
Florylpicoxamid	21	Powdery mildew	EU: Authorisation pending
Fluopicolide	43	Downy mildew	EU: Candidate for substitution
Fluopyram + tebuconazole	7 + 3	Powdery mildew	<u>Tebuconazole:</u> APVMA: nominated for review Canada: Under review EU: Under review. Candidate for substitution USA: Under review
Hydrogen peroxide + peroxyacetic acid	M	Powdery mildew	
Iodine	M	Bactericide	

Active Constituents	Chemical Group	Problem	Comment
Iprodione	2	Botrytis/Grey mould	Canada: Majority of food crop uses deleted Codex: Under review EU: No authorisation in place USA: Proposed deletion or restriction of uses
Kresoxim-methyl	7	Powdery mildew	
Mancozeb	M3	Alternaria leaf blight	APVMA: nominated for review Canada: Many uses cancelled Codex: To be reviewed 2024/25 EU: Authorisation not renewed
		Anthracnose	
		Downy mildew	
		Gummy stem blight	
		Powdery mildew	
		Septoria spot	
Melaleuca oil	46	Powdery mildew	
Metalaxyl	4	Phytophthora soil fungus (Dieback)	EU: Candidate for substitution
Metalaxyl/metalaxyl-M	4	Damping off	Metalaxyl EU: Candidate for substitution Metalaxyl-M EU: Restricted use approval
		Downy mildew	
		Gummy stem blight	
Metiram	M3	Downy mildew	APVMA: nominated for review Canada: Proposed cancelling of foliar uses other than potato Codex: To be reviewed 2024/25 EU: Under review
		Gummy stem blight	
Metrafenone	U8	Powdery mildew	
Oxadixyl	4	Downy mildew	EU: No authorisation
		Gummy stem blight	
Oxathiapiprolin	49	Downy mildew	
Penthiopyrad	7	Botrytis/Grey mould	
		Gummy stem blight	
		Powdery mildew	
Phosphorous acid	33	Downy mildew	
Potassium bicarbonate	M2	Powdery mildew	
Propamocarb HCl	28	Downy mildew	

Active Constituents	Chemical Group	Problem	Comment
Propineb	M3	Anthracnose	APVMA: nominated for review EU: No authorisation in place Codex: To be reviewed 2024/25
		Downy mildew	
		Gummy stem blight	
Proquinazid	13	Powdery mildew	
Pydiflumetofen + difenoconazole	7 + 3	Cercospora leaf spot	Difenoconazole: APVMA: nominated for review EU: Candidate for substitution USA: Under review Pydiflumetofen: EU: Authorisation pending
		Early blight	
		Powdery mildew	
Primethanil	9	Botrytis/Grey mould	Canada: Under review
Pyriofenone	U8	Powdery mildew	
<i>Streptomyces lydicus</i>	BM02	Powdery mildew	
Sulfur	M2	Anthracnose	
		Downy mildew	
		Rust	
		Septoria spot	
		Target spot (Early blight)	
Triadimefon	3	Powdery mildew	APVMA: nominated for review EU: No authorisation in place USA: Under review. Proposed use restrictions on turf and ornamentals
		Powdery mildew	
Zineb	M3	Anthracnose	APVMA: nominated for review Codex: To be reviewed 2024/25 EU: No authorisation in place
		Downy mildew	

Active Constituents	Chemical Group	Comment
WEEDS		
Clomazone	13	
Diquat	22	APVMA: Currently under review EU: No authorisation in place
Fluazifop-P	1	

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.

Disclaimer:

Horticulture Innovation Australia Limited (Hort Innovation) makes no representations and expressly disclaims all warranties (to the extent permitted by law) about the accuracy, completeness, or currency of information in MT20007 – Regulatory Support & Response Co-ordination. Reliance on any information provided by Hort Innovation is entirely at your own risk. Hort Innovation is not responsible for, and will not be liable for, any loss, damage, claim, expense, cost (including legal costs) or other liability arising in any way, including from any Hort Innovation or other person's negligence or otherwise from your use or non-use of MT20007 – Regulatory Support & Response Co-ordination, or from reliance on information contained in the material or that Hort Innovation provides to you by any other means.

Legal notice

Copyright © Horticulture Innovation Australia Limited 2023

Copyright subsists in Ag-Chemical Update. Horticulture Innovation Australia Limited (Hort Innovation) owns the copyright, other than as permitted under the Copyright ACT 1968 (Cth). The Ag-Chemical Update (in part or as a whole) cannot be reproduced, published, communicated or adapted without the prior written consent of Hort Innovation. Any request or enquiry to use the Ag-Chemical Update should be addressed to:

Communications Manager
Hort Innovation
Level 7, 141 Walker Street
North Sydney NSW 2060
Australia

Email: communications@horticulture.com.au

Phone: 02 8295 2300