

Celery 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Regulatory pressures on agrichemicals are increasing globally, with many being either restricted or withdrawn from use.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 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.

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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	Vegetable leafminer (PER81876)	APVMA: Nominated for spray drift label review Canada: Some uses amended, or cancelled EU: Use restricted to permanent greenhouses
Afidopyropen	9D	Cabbage aphid	EU: No authorisations
		Cotton aphid	
		Currant lettuce aphid	
		Green peach aphid	
		Silverleaf whitefly	
Bifenthrin	3A	Red-legged earth mite (PER86599)	Canada: Not authorised EU: Not authorised
Buprofezin	16	Greenhouse whitefly (PER82467)	EU: MRLs set to limit of quantification
Chlorantraniliprole	28	Helicoverpa spp.	
Chlorpyrifos	1B	Black field cricket	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
		Cutworms	
		Field crickets	
		Migratory locusts	
		Mole crickets	
		Spotted vegetable weevil	
		Spur throated locust	
		Vegetable weevil	

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Active Constituents	Chemical Group	Problem	Comments
Chlorpyrifos	1B	Wingless grasshopper	
		African black beetle (PER14583)	
		False wire worm (PER14583)	
		Wireworm (PER14583)	
Cyantraniliprole	28	Vegetable leafminer (<i>Liriomyza spp.</i>) (PER90927)	
Cyromazine	17	Liriomyza species (PER81867)	EU: No authorisation in place
Diazinon	1B	Caterpillars	APVMA: Under review
		Cutworms	EU: No authorisation in place Codex: JMPR recommended withdrawal of Codex MRLs.
Emamectin benzoate	6	Cluster caterpillar (PER88066)	EU: Candidate for substitution
		Helicoverpa spp. (PER88066)	
		Lightbrown apple moth (PER88066)	
Esfenvalerate	3A	Helicoverpa spp.	EU: Candidate for substitution
		Lucerne leaf roller	
Fipronil	2B	Western flower thrips (PER83203)	APVMA: Under review Codex: Re-evaluation underway EU: No authorisation in place USA: Under review
Flubendiamide	28	Helicoverpa spp.	
Helicoverpa NPV	31	Helicoverpa spp.	
Imidacloprid	4A	Aphids (PER12489)	APVMA: Under review Canada: Field uses cancelled or amended EU: No authorisation USA: Re-registration with new risk mitigation measures
Indoxacarb	22A	Lucerne leaf roller	Canada: No authorisations EU: Authorisation not renewed. Grace period expired September 2022 UK: Proposed non-renewal
		Helicoverpa spp. (PER14843)	
		Lightbrown apple moth (PER14843)	
		Vegetable weevil (PER14843)	

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Active Constituents	Chemical Group	Problem	Comments
Malathion/Maldison	1B	28-spotted potato ladybird	APVMA: Under review Codex: Re-evaluation scheduled for 2025/26 EU: Restricted use to permanent greenhouses
		Aphids	
		Australian plague locust	
		Cabbage white butterfly	
		Diamondback moth	
		Green vegetable bug	
		Jassids/ leafhoppers	
		Red-legged earth mite	
		Rutherglen bugs	
		Thrips	
Methomyl	1A	Thrips	APVMA: nominated for review Canada: Re-evaluation completed. Majority of uses removed EU: No authorisations in place USA: Under review
		Cluster caterpillar (PER82428)	
		Cucumber moth (PER82428)	
		Helicoverpa spp. (PER82428)	
		Loopers (PER82428)	
		Rutherglen bugs (PER82428)	
		Webworms (PER82428)	
		Western flower thrips (PER82428)	
		Fall armyworm (PER89293)	
Permethrin	3A	Helicoverpa spp.	Codex: Re-evaluation scheduled. Support uncertain EU: No authorisation
		Lucerne leaf roller	

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Petroleum oil	-	Aphids (PER12221)	
		Green mirid (PER12221)	
		Green vegetable bug (PER12221)	
		Grey cluster bug (PER12221)	
		Jassids/ leafhoppers (PER12221)	
		Mites (PER12221)	
		Rutherglen bugs (PER12221)	
		Thrips (PER12221)	
Pirimicarb	1A	Aphids	Codex: JMPR re-evaluation scheduled EU: Candidate for substitution
		Cotton aphid	
		Green peach aphid	
Pymetrozine	9B	Aphids	Canada: Restricted use to glasshouses only Codex: No registrant support EU: Not authorised
Spinetoram	5	Caterpillars	
		Helicoverpa spp.	
		Vegetable leafminer (<i>Liriomyza spp.</i>) (PER91155)	
Spinosad	5	Helicoverpa spp.	
		Fall armyworm (PER89870)	
		Vegetable leafminer (<i>Liriomyza spp.</i>) (PER90928)	

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Spirotetramat	23	Cotton aphid	
		Plague thrips	
		Tomato thrips	
		Western flower thrips	
		Vegetable leafminer (<i>Liriomyza spp.</i>) (PER88640)	
Sulfoxaflor	4C	Green peach aphid	USA: Pollinator concerns EU: Restricted to permanent glasshouses only
Trichlorfon	1B	Cutworms	APVMA: nominated for review
		Cabbage white butterfly	Codex: No MRLs
		Green vegetable bug	EU: No authorisations USA: No MRLs

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Active Constituents	Chemical Group	Problem	Comments
DISEASES			
Boscalid	7	Sclerotinia rot (PER11127)	Canada: Under review
Chlorothalonil	M5	Septoria spot	APVMA: nominated for review
		Early blight	Canada: Cancellation of uses proposed EU: No authorisation in place USA: Under review
Copper	M1	Bacterial soft rot	EU: Candidates for substitution
		Early blight	
		Leaf spots	
		Septoria spot	
		Soft rot	
Cyprodinil + fludioxonil	9 + 12	Anthrachnose (PER93212–Qld only)	Cyprodinil: Canada: Under review EU: Candidate for substitution Fludioxonil: EU: Under review, & candidate for substitution
Difenoconazole	3	Early blight	APVMA: nominated for review
		Septoria spot	EU: Candidate for substitution USA: Under review
Hydrogen peroxide +peroxyacetic acid	M	Cercospora leaf spot	
Iprodione	2	Sclerotinia rot	Canada: Majority of food crop uses deleted Codex: Under review EU: No authorisation in place USA: Proposed deletion or restriction of uses
Mancozeb	M3	Early blight	APVMA: nominated for review
		Leaf spots	Canada: Many uses cancelled Codex: To be reviewed 2024/25 EU: Authorisation not renewed
		Powdery mildew	
		Septoria spot	

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Active Constituents	Chemical Group	Problem	Comments
Metalaxyl-M	4	Septoria spot (PER13673)	Metalaxyl-M EU: Restricted use approval
Metiram	M3	Early blight Septoria spot	APVMA: nominated for review Canada: Proposed cancelling of foliar uses other than potato Codex: To be reviewed 2024/25 EU: Under review
Propiconazole	3	Early blight (PER14479) Septoria spot (PER14479)	APVMA: nominated for review EU: No authorisations USA: Under review
Propineb	M3	Septoria spot	APVMA: nominated for review EU: No authorisation in place Codex: To be reviewed 2024/25
Thiram	M3	Anthrachnose Botrytis rot Septoria spot	APVMA: nominated for review Canada: Cancelled all foliar uses (2021) Codex: To be reviewed 2024/25 EU: No authorisation in place
Trifloxystrobin	11	Septoria spot	Canada: Under review
Zineb	M3	Early blight Septoria spot	APVMA: nominated for review Codex: To be reviewed 2024/25 EU: No authorisation in place
Ziram	M3	Septoria spot	APVMA: nominated for review Canada: Cancelling of all uses Codex: To be reviewed 2024/25 EU: Candidate for substitution

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Active Constituents	Chemical Group	Comment
WEEDS		
Clethodim	1	Codex: MRLs proposed for deletion
Diquat	22	APVMA: Currently under review EU: No authorisation in place
Fluazifop-P	1	
Linuron	5	Canada: Proposed cancellation of many uses EU: No authorisation in place
Paraquat	22	APVMA: Currently under review Canada: Review initiated EU: No authorisation in place Rotterdam Convention: nomination

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