

Table grape 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Regulatory pressures on agrichemicals are increasing globally, with many being either restricted or withdrawn from use.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 table grapes as well as current initiatives aimed at addressing identified pest management deficiencies.

Table grape 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	Comment
INSECT AND OTHER PESTS			
Abamectin + Chlorantraniliprole	6 + 28	Garden weevil	<u>Abamectin</u> APVMA: Nominated for spray drift label review Canada: Some uses amended EU: Use restricted to permanent greenhouses
		Grape leaf rust mite	
		Grapevine moth	
		Lightbrown apple moth	
		Two-spotted mite	
Acetamiprid + pyriproxifen	4A + 7C	Grapevine scale	Acetamiprid APVMA: Under review
		Lightbrown apple moth	
		Longtailed mealybug	
Alpha-cypermethrin	3A	Garden weevil (Non-bearing)	EU: No authorisation UK: No authorisation
		Apple weevil (Non-bearing)	
		Circulio beetle (Non-bearing)	
		Cutworms (Non-bearing)	
Bifenazate	20D	Two-spotted mite(PER14492)	Canada: Under review EU: Use restricted to non-edible crops in permanent greenhouses
Bifenthrin	3A	Fig longicorn/ trunk borer	Canada: Not authorised EU: Not authorised

Active Constituents	Chemical Group	Problem	Comment
Buprofezin	16	Tuber mealybug Longtailed mealybug	EU: MRLs set to limit of quantification
Carbaryl	1A	Crickets Cutworms Grasshoppers	Canada: Reviewed, large number of uses deleted Codex: Review scheduled, support uncertain EU: Authorisation not renewed USA: Under review
Chlorantraniliprole	28	Grapevine moth Lightbrown apple moth	
Chlorpyrifos	1B	African black beetle Australian plague locust Grapevine moth Grapevine scale Lightbrown apple moth Mealybug Migratory locust Spur-throated locust Tuber mealybug	APVMA: Under review Codex: All MRLs revoked Canada: Cancellation of all uses. EU: No authorisation in place USA: EPA decision to cancel use on food crops
Clothianidin	4A	Fruit flies Longtailed mealybug	APVMA: Under review Canada: Field uses cancelled or amended EU: Not authorised USA: Re-registration with new risk mitigation measures
Cyflumetofen	25A	European red mite Two-spotted mite	
Diazinon	1B	Mealybug Australian plague locust	APVMA: Under review EU: No authorisation in place Codex: Withdrawal of Codex MRLs recommended

Active Constituents	Chemical Group	Problem	Comment
Dimethoate	1B	Fruit flies (PER13859) After harvest orchard clean-up spray	Codex: No MRL EU: Not authorised
Emamectin benzoate	6	Grapevine moth	EU: Candidate for substitution
		Lightbrown apple moth	
		Fall armyworm	
Esfenvalerate	3A	Garden weevil	EU: Candidate for substitution
Ethyl formate	8A	Longtailed mealybug	EU: No authorisation in place
		Plague thrips	
		Two-spotted mite	
		Western flower thrips	
		Lightbrown apple moth	
		Redback spider	
Etoxazole	10B	Two-spotted mite	EU: Use on greenhouse ornamentals only & Candidate for substitution
Fenbutatin oxide	12B	Grape leaf rust mite (PER13378)	APVMA: nominated for review Codex: To be reviewed by JMPR. No supporting registrant EU: No authorisation in place USA: Under review
		Two-spotted mite (PER13378)	
Fenitrothion	1B	Australian plague locust	EU: No authorisation in place
		Migratory locust	
		Small plague grasshopper	
		Spur-throated locust	
		Wingless grasshopper	
Fipronil	2B	European wasp (Baits and trap - PER86492 / PER89402 / PER88071)	APVMA: Under review Codex: Re-evaluation completed, many MRLs withdrawn EU: No authorisation in place USA: Under review
		Fruit fly trap toxicant	

Active Constituents	Chemical Group	Problem	Comment
Indoxacarb	22A	European earwig	Canada: No authorisation EU: No authorisation UK: Proposed non-renewal
		Garden weevil	
		Inland katydid	
		Wingless grasshopper	
		Grapevine moth	
		Lightbrown apple moth	
Lambda-cyhalothrin	3A	Fruit flies (PER12961 – SA Biosecurity) (Soil drench)	EU: Candidate for substitution
Malathion	1B	Fruit flies (cover spray & bait spray)	APVMA: Under review Codex: Re-evaluation scheduled for 2025/26 EU: Restricted use to permanent greenhouses
		Grapevine scale	
		Mealybug	
		Australian plague locust	
		Grapevine moth	
		Migratory locust	
Spur-throated locust			
<i>Metarhizium anisopliae</i> var. <i>acridum</i>	UNF	Australian plague locust	
		Grasshoppers	
		Wingless grasshopper	
Methomyl	1A	Grapevine hawk moth	APVMA: nominated for review Canada: Re-evaluated with majority of uses removed EU: No authorisations in place USA: Under review
		Grapevine moth	
		Lightbrown apple moth	

Active Constituents	Chemical Group	Problem	Comment
Methoxyfenozide	18	Lightbrown apple moth	EU: Proposed restricted authorisation & Candidate for substitution
Paraffinic oil/ petroleum oil	UNM	European red mite	
		Grape leaf blister mite	
		Grapevine scale	
		Mealybug	
		Scale insects	
		Two-spotted mite	
Pheromone (tetradecadienyl acetate +tetradecenyl acetate)		Lightbrown apple moth	
Pyrethrins	3A	Aphids	Canada: Under review
		Caterpillars	
		Fruit flies	
		Plague thrips	
		Rutherglen bug	
		Lightbrown apple moth	
Pyridaben	21A	Bunch/vine mite	
Pyriproxyfen	7C	Grapevine scale(Nursery stock non-bearing)	
Sodium Metabisulfite	UN	Phylloxera (PER11748)	
Spinetoram	5	Grapevine moth	
		Lightbrown apple moth	
Spinosad	5	Grapevine moth	
		Lightbrown apple moth	
		Fall armyworm (PER89870)	

Active Constituents	Chemical Group	Problem	Comment
Spirotetramat	23	Grapevine scale	
		Longtailed mealybug	
		Northern plague thrips	
		Plague thrips	
		Tuber mealybug	
Sulfoxaflor	4C	Longtailed mealybug	USA: Pollinator concerns EU: Restricted to permanent glasshouses only
Sulfur	UN	Bunch/vine mite	
		Grape leaf blister mite	
		Grape leaf rust mite	
Sulphur Dioxide & Carbon Dioxide	UN	Redback spider(PER85499)	
Tau-fluvalinate	3A	Plague thrips	
Tebufenozide	18	Lightbrown apple moth	
Tetraniliprole	28	Apple weevil	EU: No authorisation
		Fuller's rose weevil	
		Garden weevil	
		Grapevine moth	
		Light brown apple moth	
		Mediterranean fruit fly	
Trichlorfon	1B	Grapevine moth	APVMA: nominated for review Codex: No MRLs EU: No authorisations USA: No MRLs
		Fruit flies (PER12439)	
OTHER PESTS			
Copper complex		Slugs and snails	
Iron-EDTA complex		Slugs and snails	
Metaldehyde		Slugs and snails	
Methiocarb		Slugs and snails	

Active constituent	Chemical Group	Disease/Problem	Comment
DISEASES			
Ametoctradin + dimethomorph	45 + 40	Downy mildew	<u>Dimethomorph</u> EU: Under review
Amisulbrom	21	Downy mildew	
Amisulbrom + Copper	21 + M1	Downy mildew	<u>Copper</u> EU: Candidates for substitution
<i>Aureobasidium pullulans</i>	-	Botrytis rot /Grey mould	
Azoxystrobin	11	Botrytis rot /Grey mould	Canada: Review proposed
		Downy mildew	
		Powdery mildew	
Azoxystrobin + dimethomorph	11 + 40	Downy mildew	<u>Dimethomorph</u> EU: Under review
Azoxystrobin + tebuconazole	11 + 3	Botrytis rot /Grey mould	<u>Tebuconazole</u> APVMA: nominated for review Canada: Under review EU: Candidate for substitution USA: Under review
		Downy mildew	
		Powdery mildew	
<i>Bacillus amyloliquefaciens</i>	44	Botrytis rot /Grey mould	
Boscalid	7	Botrytis rot /Grey mould	Canada: Under review
		Powdery mildew	
Captan	M4	Black spot/Anthracnose	EU: Under review proposed restriction to use in permanent greenhouses only USA: Under review
		Botrytis rot /Grey mould	
		Downy mildew	
		Phomopsis cane & leaf spot	
Chlorothalonil	M5	Botrytis rot /Grey mould	APVMA: nominated for review Canada: Proposed cancellation of uses EU: No authorisation in place USA: Under review
		Downy mildew	
		Black spot/Anthracnose	

Active constituent	Chemical Group	Disease/Problem	Comment
Copper	M1	Black spot/Anthracnose	EU: Candidate for substitution
		Downy mildew	
		Phomopsis cane & leaf spot	
		Powdery mildew	
Cyflufenamid	U6	Powdery mildew	
Cyproconazole	3	Eutypa dieback	APVMA: nominated for review EU: No authorisation in place
Cyprodinil + fludioxonil	9 + 12	Botrytis rot /Grey mould	<u>Cyprodinil</u> Canada: Under review EU: Candidate for substitution <u>Fludioxonil</u> EU: Under review, & candidate for substitution
Difenoconazole	3	Powdery mildew	APVMA: nominated for review EU: Candidate for substitution USA: Under review
Dimethomorph	40	Downy mildew	
Dithianon	M9	Black spot/Anthracnose	EU: Restricted use to non-edible crops
		Downy mildew	
		Phomopsis cane & leaf spot	
Fenhexamid	17	Botrytis rot /Grey mould	
Fenpyrazamine	17	Botrytis rot /Grey mould	
Florylpicoxamid	21	Powdery mildew	EU: Authorisation pending
Fluazinam	29	Eutypa dieback	Canada: Under review
		Phomopsis cane & leaf spot	
Fludioxonil + pydiflumetofen	12 + 7	Botrytis rot /Grey mould	Fludioxonil EU: Under review & Candidate for substitution
		Powdery mildew	
Fluopyram + tebuconazole	7 + 3	Botrytis rot /Grey mould	Tebuconazole APVMA: nominated for review Canada: Under review EU: Candidate for substitution USA: Under review
		Powdery mildew	

Active constituent	Chemical Group	Disease/Problem	Comment
Fluoxapiprolin	49	Downy mildew	EU: Authorisation pending
Hydrogen peroxide + peroxyacetic acid	M	Downy mildew	
		Powdery mildew	
Iodocarb	28	Eutypa dieback	EU: Not authorised
Iprodione	2	Botrytis rot /Grey mould	Canada: Majority of food crop uses deleted Codex: Review scheduled EU: No authorisation in place
Mancozeb	M3	Black spot/Anthracnose	APVMA: nominated for review
		Downy mildew	Canada: Many uses cancelled
		Phomopsis cane & leaf spot	Codex: To be reviewed 2024/25
		Powdery mildew	EU: Authorisation not renewed
Mandipropamid	40	Downy mildew	
Mefentrifluconazole	3	Powdery mildew	
Metalaxyl/ Metalaxyl-M	4	Downy mildew	<u>Metalaxyl</u> EU: Candidate for substitution <u>Metalaxyl-M</u> EU: Restricted use approval
Metiram	M3	Black spot/Anthracnose	APVMA: nominated for review
		Downy mildew	Canada: All foliar uses, other than potato cancelled
		Phomopsis cane & leaf spot	Codex: To be reviewed 2024/25 EU: Under review
Metrafenone	U8	Powdery mildew	
Myclobutanil	3	Powdery mildew	APVMA: nominated for review EU: No authorisation in place
Oxadixyl	4	Downy mildew	EU: No authorisation in place
Penconazole	3	Powdery mildew	APVMA: nominated for review
Phosphonic acid	33	Downy mildew	
Plant oils (eugenol, geraniol, thymol)	1	Botrytis rot /Grey mould	

Active constituent	Chemical Group	Disease/Problem	Comment
Polyoxin-D	19	Botrytis rot /Grey mould	EU: No authorisation in place
		Powdery mildew	
Potassium bicarbonate	M2	Downy mildew	EU: No authorisation in place
		Powdery mildew	
Propineb	M3	Downy mildew	APVMA: nominated for review EU: No authorisation in place Codex: To be reviewed 2024/25
Proquinazid	13	Powdery mildew	
Pydiflumetofen	7	Powdery mildew	EU: Authorisation pending
Pydiflumetofen + fludioxonil	7 + 12	Botrytis	Fludioxonil EU: Under review, & candidate for substitution
Pyraclostrobin	11	Downy mildew	
		Powdery mildew	
Pyrimethanil	9	Botrytis rot /Grey mould	Canada: Under review
Pyriofenone	U8	Powdery mildew	
Quinoxyfen	13	Powdery mildew	EU: No authorisations
Sodium metabisulfite	M	Botrytis rot /Grey mould	
		Storage rots(post-harvest)	
Spiroxamine	5	Powdery mildew	
Sulfur	M2	Powdery mildew	
Tea tree oil		Botrytis	
		Powdery mildew	
Tebuconazole	3	Botryosphaeria dieback	Tebuconazole APVMA: nominated for review Canada: Under review EU: Candidate for substitution USA: Under review
		Eutypa dieback	
		Powdery mildew	
Tetraconazole	3	Powdery mildew	APVMA: nominated for review
Thiram	M3	Black spot/Anthracnose	APVMA: nominated for review Canada: Cancelled all foliar uses Codex: To be reviewed 2024/25 Europe: No authorisation in place

Active constituent	Chemical Group	Disease/Problem	Comment
Triadimefon	3	Powdery mildew	APVMA: nominated for review EU: No authorisation in place USA: Under review. Proposed use restrictions on turf and ornamentals
Triadimenol	3	Powdery mildew	APVMA: nominated for review Canada: No authorisation in place EU: No authorisation in place USA: Registration cancelled
<i>Trichoderma harzianum</i>	BM2	Eutypa dieback	
Trifloxystrobin	11	Downy mildew	Canada: Under review
		Powdery mildew	
Zineb	M3	Downy mildew	APVMA: nominated for review Codex: To be reviewed 2024/25 EU: No authorisation in place
Ziram	M3	Black spot/Anthracnose	APVMA: nominated for review Canada: Cancelling of all uses Codex: To be reviewed 2024/25 EU: Candidate for substitution

Active Constituents	Chemical Group	Comment
WEEDS		
Acetic acid	0	
Amitrole	34	APVMA: nominated for review EU: No authorisation in place
Carfentrazone-ethyl	14	
Dichlobenil	29	EU: No authorisation in place
Diquat	22	APVMA: Currently under review EU: No authorisation in place
Fluazifop	1	
Flumioxazin	14	EU: Candidate for substitution
Glufosinate	10	Canada: Review proposed EU: No authorisation in place
Glyphosate	9	Ongoing issues internationally EU: Under review
Haloxyfop-P	1	EU: Not authorised
Isoxaben	29	
Norflurazon	12	EU: No authorisation in place
Oryzalin	3	EU: No authorisation in place
Oxyfluorfen	14	EU: Candidate for substitution
Paraquat	22	APVMA: Currently under review Canada: Review initiated EU: Not authorised Rotterdam Convention: nominated
Pelargonic acid/Nonanoic acid	0	
Pendimethalin	5	EU: Candidate for substitution
Quizalofop-P	1	Canada: Under re-evaluation EU: Candidate for substitution
Simazine	5	APVMA: nominated for review EU: No authorisation in place
Trifluralin	3	EU: No authorisation in place

Active Constituents	Chemical Group	Comment
PLANT GROWTH REGULATORS		
Calcium nitrate (PER86553)		
Chlormequat		
Cyanamide		EU: No authorisation in place
Ethephon (PER87879)		
Gibberellic acid		
Forchlorfenuron		
S-abscisic acid		

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