

## Blackberry and Raspberry 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Regulatory pressures on agrichemicals are increasing globally, with many being either restricted or withdrawn from use.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 blackberries and raspberries as well as current initiatives aimed at addressing identified pest management deficiencies

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

Active Constituents	Chemical group	Problem	Comment
<b>INSECT AND OTHER PESTS</b>			
Abamectin	<b>6</b>	Two-spotted (Red spider) mite	APVMA: Nominated for spray drift label review Canada: Some uses amended, & use in greenhouse gown cut flowers cancelled EU: Use restricted to permanent greenhouses
		Fruit flies	
Acetamiprid + pyriproxyfen	<b>4A + 7C</b>	Cottonseed bug (PER91601)	Acetamiprid <a href="#">APVMA: Under review</a>
		Fruit flies (PER91601 - Suppression only)	
		Green potato bug (PER91601)	
		Green vegetable bug (PER91601)	
		Leafhoppers/plant hoppers (PER91601)	
		Lightbrown apple moth (PER91601)	
Afidopyropen	<b>9D</b>	Green peach aphid (PER90178)	EU: No authorisations
		Greenhouse whitefly (PER90178)	
Bifenazate	<b>20D</b>	European red mite(PER14425)	Canada: Under review EU: Use restricted to non-edible crops in permanent greenhouses
		Two-spotted (Red spider) mite (PER14425)	
Bifenthrin	<b>3A</b>	Red-shouldered leaf beetle	Canada: Not authorised EU: Not authorised
		Plague thrips (PER84972)	

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Active Constituents	Chemical group	Problem	Comment
Carbaryl	<b>1A</b>	Raspberry fruit caterpillar	Canada: Reviewed, large number of uses deleted Codex: Review scheduled, support uncertain EU: Authorisation not renewed USA: Under review
		Weevils	
		Armyworms (Raspberries)	
		Grasshoppers (Raspberries)	
		Lightbrown apple moth (Raspberries)	
		Mealybugs (Raspberries)	
		Rutherglen bug (Raspberries)	
		Wingless grasshopper (Raspberries)	
Chlorpyrifos	<b>1B</b>	European earwig(PER90216)	<a href="#">APVMA: Under review.</a> Codex: All MRLs revoked Canada: Cancellation of all uses. EU: No authorisation in place USA: EPA decision to cancel use on food crops
Dimethoate	<b>1B</b>	Aphids	Codex: No MRL EU: Not authorised
		Jassids	
		Redlegged earth mite	
		Rutherglen bug	
		Spider mite	
		Strawberry bug	
		Thrips	
		Fruit flies (PER135859) (After harvest Orchard clean-up)	
Emulsifiable botanical oil	<b>UN</b>	Two-spotted (Red spider) mite (PER14234)	
Etoxazole	<b>10B</b>	Bean spider mite (PER89406)	EU: Only uses on greenhouse ornamentals approved & Candidate for substitution
		Two-spotted (Red spider) mite (PER89406)	

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Active Constituents	Chemical group	Problem	Comment
Fenbutatin oxide	<b>12B</b>	Bean spider mite(PER89407)	<a href="#">APVMA: nominated for review</a> Codex: To be reviewed by JMPR. No supporting registrant EU: No authorisation in place USA: Under review
		Broad mite(PER89407)	
		European red mite(PER89407)	
		Red berry mite(PER89407)	
		Two-spotted (Red spider) mite(PER89407)	
Fipronil	<b>2B</b>	English wasp	<a href="#">APVMA: Under review</a> Codex: Re-evaluation completed, many MRLs withdrawn EU: No authorisation in place USA: Under review
		European wasp	
		Fruit fly trap toxicant	
Fonicamid	<b>29</b>	Aphids (PER89214)	
		Green vegetable bug (PER89214)	
		Greenhouse whitefly (PER89214)	
		Jassids (PER89214)	
		Rutherglen bug (PER89214)	
Helicoverpa NPV	<b>31</b>	Helicoverpa species	
Indoxacarb	<b>22A</b>	Elephant weevil	Canada: No authorisations EU: No authorisation UK: Proposed non-renewal
		Lightbrown apple moth (PER13289)	
Lambda-cyhalothrin	<b>3A</b>	Fruit flies (PER12961 – SA Biosecurity) (Soil drench)	
Malathion/maldison	<b>1B</b>	Fruit flies	<a href="#">APVMA: Under review</a> Codex: Re-evaluation scheduled EU: Restricted use to permanent greenhouses
Permethrin	<b>3A</b>	European wasp	Codex: Re-evaluation scheduled. Support uncertain EU: No authorisation
Petroleum oil	<b>UNM</b>	Scale insects(PER13957)	
		Two-spotted (Red spider) mite(PER13957)	
Pirimicarb	<b>1A</b>	Aphids	Codex: JMPR re-evaluation scheduled EU: Candidate for substitution
		Green peach aphid (Blackberries)	

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Active Constituents	Chemical group	Problem	Comment
Pyrethrins	<b>3A</b>	Fruit flies	Canada: Under review
		Green stink bug (PER80070)	
		Green vegetable bug (PER80070)	
		Red-shouldered leaf beetle (PER80070)	
Spinetoram	<b>5</b>	Helicoverpa species	
		Lightbrown apple moth	
		Loopers	
		Western flower thrips	
		Fruit flies (PER87408)	
Spinosad	<b>5</b>	Caterpillars	
		Lightbrown apple moth	
		Loopers	
		Western flower thrips	
		Fall armyworm (PER89870)	
Sulfoxaflor	<b>4C</b>	Apple dimpling bug(PER90208)	USA: Pollinator concerns EU: Restricted to permanent glasshouses only
		Cottonseed bug (PER90208)	
		Green mirid & Brown mirid(PER90208)	
		Green peach aphid(PER90208)	
		Greenhouse whitefly(PER90208)	
		Rutherglen bug(PER90208)	
		Scale insects(PER90208)	
Sulfur	<b>M2</b>	Bean spider mite (Blackberries PER87245)	
		Broad mite (Blackberries PER87245)	
		Red berry mite (Blackberries)	

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Active Constituents	Chemical group	Problem	Comment
Trichlorfon	1B	Fruit flies (PER12486)	<a href="#">APVMA: nominated for review</a>
		Fruit flies (Bait spray)	Codex: No MRLs EU: No authorisations USA: No MRLs
<b>Slugs/Snails</b>			
Methiocarb	1A	Common garden snail	EU: No authorisation in place
Copper	1A	Slugs/Snails	EU: Candidates for substitution
Iron EDTA complex			
Methiocarb			EU: No authorisation in place
Methiocarb	1A	White bradybaena (Oriental) snail	
Methiocarb	1A	White Italian (Sand dune) snail	

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<b>DISEASES</b>			
<i>A. pullulans</i>	<b>NC</b>	Anthracnose	
		Botrytis flower and fruit rot	
		Botrytis/Grey mould	
		Phomopsis fruit rot	
		Rhizopus fruit rot	
<i>Agrobacterium radiobacter</i>	-	Crown gall(PER13150)	
Azoxystrobin	<b>11</b>	Anthracnose	Canada: Review proposed
		Botrytis/Grey mould	
		Blossom blight	
		Cane spot	
		Cladosporium rot	
<i>Bacillus amyloquefaciens</i>	<b>BM02</b>	Botrytis/Grey mould(PER88058)	
Boscalid +pyraclostrobin	<b>7 + 11</b>	Blossom blight	Boscalid Canada: Under review Pyraclostrobin Canada: Under review
		Cane spot	
		Septoria leaf spot	
		Stem end rot	
		Alternaria leaf blotch(PER82986)	
		Anthracnose (PER82986)	
		Botrytis/Grey mould (PER82986)	
		Phomopsis fruit rot (PER82986)	
		Powdery mildew (PER82986)	
		Rust (PER82986)	
Captan	<b>M4</b>	Botrytis flower and fruit rot (PER13958)	EU: Under review proposed restriction to use in permanent greenhouses only USA: Under review
		Cane spot (PER13958)	
		Spur blight (PER13958)	

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Active Constituents	Chemical group	Problem	Comment
Chlorothalonil	<b>M5</b>	Botrytis/Grey mould (PER14449)	<a href="#">APVMA: nominated for review</a>
		Downy mildew (PER14449)	Canada: Proposed cancellation of uses
		Rust (PER14449)	EU: Not authorised
		Septoria leaf spot (PER14449)	USA: Under review
Copper	<b>M1</b>	Downy mildew	EU: Candidates for substitution
		Spur blight	
		Leaf diseases/spots (PER14443)	
		Rust (PER14443)	
Cyprodinil +fludioxonil	<b>9 + 12</b>	Botrytis/Grey mould (PER14422)	Cyprodinil: Canada: Under review EU: Candidate for substitution Fludioxonil: EU: Under review & candidate for substitution
Fenhexamid	<b>17</b>	Botrytis/Grey mould	
Iodine	<b>M</b>	Bactericide	
Iprodione (Boysenberry, Raspberry, Youngberry)	<b>2</b>	Botrytis/Grey mould	Canada: Majority of food crop uses deleted Codex: Review scheduled EU: No authorisation in place USA: Proposed deletion or restriction of uses
Mancozeb	<b>M3</b>	Downy mildew	<a href="#">APVMA: nominated for review</a>
		Botrytis/Grey mould (PER13958)	Canada: Many uses cancelled
		Rust (PER13958)	Codex: To be reviewed 2024/25 EU: Authorisation not renewed
Metalaxyl/Metalaxyl-M	<b>4</b>	Phytophthora(PER13958)	<u>Metalaxyl</u>
	<b>4</b>	Downy mildew(PER84973)	EU: Candidate for substitution <u>Metalaxyl-M</u> EU: Restricted use approval
Myclobutanil	<b>3</b>	Yellow rust	<a href="#">APVMA: nominated for review</a> EU: No authorisation in place
Oxathiapiprolin	<b>49</b>	Phytophthora (PER91060-Hydroponic substrate or field grown)	
Phosphorous acid	<b>33</b>	Phytophthora (PER13958)	



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Pydiflumetofen + fludioxonil	7 + 12	Grey mould ( <i>Botrytis cinerea</i> )	<p>Fludioxonil: EU: Under review &amp; candidate for substitution</p> <p>Pydiflumetofen EU: Authorisation pending</p>
Pyrimethanil	9	Botrytis/Grey mould (PER13958)	Canada: Under review
Triadimenol	3	Powdery mildew (PER13958)	<p><a href="#">APVMA: nominated for review</a></p> <p><a href="#">Canada</a>: No authorisation in place</p> <p>EU: No authorisation in place</p> <p>USA: Registration cancelled</p>

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Active Constituents	Chemical Group	Comment
<b>WEEDS</b>		
Carfentrazone-ethyl	<b>14</b>	
Glufosinate-ammonium	<b>10</b>	Canada: Review proposed EU: No authorisation in place
Glyphosate	<b>9</b>	Ongoing issues internationally EU: Under review
Oryzalin	<b>3</b>	EU: No authorisations
Simazine	<b>5</b>	<a href="#">APVMA: nominated for review</a> EU: No authorisation in place

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