

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Regulatory pressures on agrichemicals are increasing globally, with many being either restricted or withdrawn from use.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

Avocado 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	Tea red spider mite(PER14618)	APVMA: Nominated for spray drift label review Canada: Some uses amended, others cancelled EU: Use restricted to permanent greenhouses
Acetamiprid + pyriproxifen	4A + 7C	Banana/Fruit-spotting bugs	<u>Acetamiprid</u>
		Fruit flies	APVMA: Under review
		Oleander scale	EU: Under review
		Pink wax scale	
Beta-cyfluthrin	3A	Banana/Fruit-spotting bugs	EU: No authorisation in place
		Swarming leaf beetle	
Bifenazate	20D	Six-spotted mite(PER89167)	Canada: Under review
		Tea red spider mite(PER89167)	EU: Use restricted to non-edible crops in permanent greenhouses
Carbaryl	1A	Red shouldered leaf beetle	Canada: Reviewed, large number of uses deleted
		Wingless grasshopper	Codex: Review scheduled, support uncertain EU: Authorisation not renewed USA: Under review
Chlorantraniliprole	28	Avocado leafroller(PER81560)	
		Caterpillars (PER81560)	
		Ectropis looper (PER81560)	

Avocado Agrichemical Regulatory Risk assessment

Active Constituents	Chemical Group	Problem	Comment
Chlorpyrifos	1B	Avocado leafroller	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
		Fiorinia scale	
		Hairy leaf eating caterpillar	
		Ivy leafroller	
		Latania scale	
		Lightbrown apple moth	
		Red shouldered leaf beetle	
		Fruit flies(Bait spray)	
Dimethoate	1B	Qld Fruit fly	Codex: MRL set at 2 mg/kg. EU: Not authorised
		Fruit flies (Post-harvest dip suspended)	
Etoazole	10B	Six-spotted mite (PER85167)	EU: Only uses on greenhouse ornamentals approved & Candidate for substitution
Fenbutatin oxide	12B	Six-spotted mite	APVMA: nominated for review Codex: To be reviewed by JMPR. No supporting registrant EU: No authorisation in place
		Tea red spider mite	
Flupyradifurone	4D	Banana/Fruit-spotting bugs	
		Green plant hopper	
		Mango plant hopper	
Lambda-cyhalothrin	3A	Fruit flies(PER12961 – SA Biosecurity) (Soil drench)	EU: Candidate for substitution
Methomyl	1A	Ectropis looper (PER14597)	APVMA: nominated for review Canada: Re-evaluation completed. Majority of uses removed EU: No authorisations in place USA: Under review
Methoxyfenozide	18	Avocado leafroller	EU: Proposed restricted authorisation & Candidate for substitution

Avocado Agrichemical Regulatory Risk assessment

Active Constituents	Chemical Group	Problem	Comment
Paraffinic/petroleum oil	UNM	Scale insects	
		Fruit flies	
		Greenhouse thrips	
Spinetoram	5	Avocado leafroller	
		Ectropis looper	
		Flower eating caterpillars	
		Ivy leafroller	
		Leafroller (Tortrix) caterpillars	
		Lightbrown apple moth	
		Loopers	
		Redbanded thrips	
		Sorghum head caterpillar	
		Yellow peach moth	
		Spinosad	
Ectropis looper			
Flower eating caterpillars			
Ivy leafroller			
Leafroller (Tortrix) caterpillars			
Lightbrown apple moth			
Loopers			
Redbanded thrips			
Sorghum head caterpillar			
Yellow peach moth			

Avocado Agrichemical Regulatory Risk assessment

Active Constituents	Chemical Group	Problem	Comment
Sulfoxaflor	4C	Banana/Fruit-spotting bugs	USA: Pollinator concerns EU: Restricted to permanent glasshouses only
Tebufenozide	18	Leafroller (Tortrix) caterpillars	
Tetraniliprole	28	Fruit spotting bug (PER93099)	EU: No authorisation
		Garden weevil (PER93099)	
		Lepidoptera including Loopers and Leaf rollers (PER93099)	
Trichlorfon	1B	Banana/Fruit-spotting bugs	APVMA: nominated for review
		Red shouldered leaf beetle	Codex: No MRLs
		Fruit flies (Bait spray)	EU: No authorisations
		Fruit flies Cover spray (PER12450)	USA: No MRLs

Avocado Agrichemical Regulatory Risk assessment

Active Constituents	Chemical Group	Problem	Comment
DISEASES			
Azoxystrobin	11	Anthracnose Stem-end rot	Canada: Review proposed
Azoxystrobin + fludioxonil	11 + 12	Side rot Stem-end rot	<u>Fludioxonil</u> Codex: MRL at 1.5 mg/kg EU: Under review/ Candidate for substitution
<i>B. amyloliquefaciens</i> Strain QST 713	BM 02	Anthracnose Stem-end rot	
Copper	M1	Anthracnose Cercospora spot Phytophthora stem rot Sooty blotch Trunk (Stem) canker	EU: Candidate for substitution
Didecyl dimethyl NH ₄ Cl	-	Sanitizer	EU: No authorisation in place
Fluopyram + trifloxystrobin	7 + 11	Anthracnose Stem-end rot	<u>Trifloxystrobin</u> Canada: Under review
Fosetyl-Al	33	Phytophthora root rot	Canada: Under review
Metalaxyl/metalaxyl-M	4	Phytophthora root rot	<u>Metalaxy!</u> EU: Candidate for substitution <u>Metalaxyl-M</u> EU: Restricted use approval
Phosphorous acid	33	Phytophthora root rot	
Prochloraz	3	Anthracnose Stem-end rot	Codex: Periodic re-evaluation scheduled EU: Not authorised
Thiram	M3	Anthracnose Stem-end rot	APVMA: nominated for review Canada: Cancelled all foliar uses (2021) Codex: To be reviewed 2024/25 EU: No authorisation in place

Avocado Agrichemical Regulatory Risk assessment

Active Constituents	Chemical Group	Comment
WEEDS		
Diquat	22	APVMA: Currently under review EU: Not authorised
Fluazifop	1	
Flumioxazin	14	EU: Candidate for substitution
Glufosinate	10	Canada: review proposed EU: No authorisations
Glyphosate	9	Ongoing issues internationally EU: Under review
Haloxyfop-P	1	EU: Not authorised
Oryzalin	3	EU: Not authorised
Oxyfluorfen	14	EU: Candidate for substitution USA: Interim review decision Label amendments proposed
Paraquat	22	APVMA: Currently under review Canada: Review initiated EU: No authorisation in place Rotterdam Convention - nomination
Pendimethalin	3	EU: Candidate for substitution
PLANT GROWTH REGULATORS		
1-methylcyclopropene (Po)	-	
Paclobutrazol (PER85877)		EU: Candidate for substitution
Uniconazole-P	3	Vegetative growth control

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