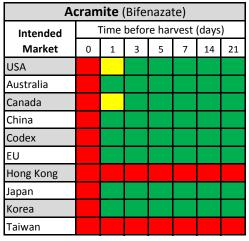
Pre-Harvest Intervals to Comply with the Maximum Residue Limits (MRLs) of Selected Export Markets for Fourteen Insecticides Registered for Use in Blackberries for the 2021 Growing Season - October 27, 2020



Ac	Actara (Thiamethoxam)									
Intended	Time before harvest (days)									
Market	0	0 1 3 5 7 14 2								
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

Adn	Admire Pro (Imidacloprid)									
Intended		Гime	befor	e har	vest	(days)			
Market	0 1 3 5 7 14 2									
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

E	Brigade (Bifenthrin)											
Intended	Intended Time before harvest (days)											
Market	0	0 1 3 5 7 14 21										
USA												
Australia												
Canada												
China												
Codex												
EU												
Hong Kong												
Japan												
Korea												
Taiwan												

Danisal (c. 11.1.)									
Da	Danitol (Fenpropathrin)								
Intended	٦	Γime	befor	e har	vest	(days)		
Market	0	0 1 3 5 7 14 2							
USA									
Australia									
Canada									
China									
Codex									
EU									
Hong Kong									
Japan									
Korea									
Taiwan									

De	Delegate (Spinetoram)										
Intended	•	Time before harvest (days)									
Market	0	1	3	5	7	14	21				
USA											
Australia											
Canada											
China											
Codex											
EU											
Hong Kong											
Japan											
Korea											
Taiwan											

Ex	irel (Cyar	itran	ilipro	ole)					
Intended		Time	befor	e har	vest	(days)			
Market	0	0 1 3 5 7 14 21								
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

Intrepid (Methoxyfenozide)										
Intended	•	Time	befor	e har	vest	(days)			
Market	0	0 1 3 5 7 14 21								
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan					·					

Kai	Kanemite (Acequinocyl)										
Intended	•	e har	vest	(days)						
Market	0	1	3	5	7	14	21				
USA											
Australia											
Canada											
China											
Codex											
EU											
Hong Kong											
Japan											
Korea											
Taiwan											

Key to colors used in charts:

RED means that the product should not be used during this time either because of EPA label restrictions or due to a high risk of exceeding MRLs for a given market.



YELLOW means that the product should be used with caution during this time given all the variables (e.g. tank mixes, application method and calibration, use of adjuvants, environmental conditions, and post-harvest handling) that can impact the time it takes for a residue to degrade in order to meet the MRL for a given market.

GREEN means that the product is likely to be safe for use at this time with low risk of residue remaining at harvest that would exceed MRLs for a given market.

Pre-Harvest Intervals to Comply with the Maximum Residue Limits (MRLs) of Selected Export Markets for Fourteen Insecticides Registered for Use in Blackberries for the 2021 Growing Season - October 27, 2020

	Malathion									
Intended		Time before harvest (days)								
Market	0	1	3	5	7	14	21			
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

Mustang Maxx (zeta -Cypermethrin)										
Intended	-	Time	befor	e har	vest	(days)			
Market	0	1	3	5	7	14	21			
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

Onager (Hexythiazox)									
Intended	-	Γime	befor	e har	vest	(days)		
Market	0	1	3	5	7	14	21		
USA									
Australia									
Canada									
China									
Codex									
EU									
Hong Kong									
Japan									
Korea									
Taiwan									

Sivant	o Pri	me	Flup	yrad	ifuro	ne)					
Intended	T	Time before harvest (days)									
Market	0	0 1 3 5 7 14 21									
USA											
Australia											
Canada											
China											
Codex											
EU											
Hong Kong											
Japan											
Korea											
Taiwan											

	Succ	ess (Spin	osad	l)					
Intended		Time	befor	e har	vest	(days)			
Market	0	0 1 3 5 7 14 22								
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

Acknowledgements: This work was made possible with funding by the Washington Red Raspberry Commission (WRRC), Oregon Raspberry and Blackberry Commission (ORBC), and USDA Technical Assistance for Specialty Crops (TASC). Field collaborators include: Joe DeFrancesco, Dani Lightle, Peter Sturman, and Gina Koskela (OSU NWREC); Beverly S. Gerdeman and G. Hollis Spitler (WSU Mount Vernon NWREC). Sample analysis and generation of these charts was done by Camille Holladay and Keith Crosby (Synergistic Pesticide Lab in Portland, OR).

Purpose & Methods: This tool was developed to aid blackberry growers in selecting materials to manage key pests close to harvest with a particular export market in mind. Selected markets have been included, some of which have more restricted maximum residue limits (MRLs) or tolerances than required by the US for particular materials. The MRLs used to develop this tool come from those published by www.bryantchristie.com as of October 27, 2020. Please check the database as MRLs are dynamic. The data used to determine whether a longer pre-harvest interval would be necessary for a given market and its published MRL are based on a single application made near the legal US max rate for each material tested in replicated trials conducted at one location each in Oregon and Washington over three years, unless otherwise noted. All samples were extracted by the QuEChERS method and analyzed by GC/MS/MS and LC/MS/MS.

Disclaimer: These charts are just a guide. The authors of this tool cannot guarantee that any of these MRLs have not changed since October 27, 2020; therefore, the user assumes all responsibility for its use subsequently. We also cannot guarantee that a material listed for use in Oregon or Washington is registered for use outside those states (pesticide registration status is determined by the US EPA and State Governments where 'special uses' are concerned). Users outside these states are cautioned to consult with their local extension service to determine what is allowable. We also make no guarantees that any of the products listed will be effective against a particular pest. Finally, given all of the variables that can affect degradation rates - in particular the use of adjuvants and tank mixes, environmental post-application conditions, and post-harvest handling - we cannot guarantee that if a product is used according to this tool it will not leave residues that exceed MRLs for the selected market.

Pre-Harvest Intervals to Comply with the Maximum Residue Limits (MRLs) of Selected Export Markets for Twelve Fungicides Registered for Use in Blackberries for the 2021 Growing Season - October 27, 2020

Ab	Abound (Azoxystrobin)										
Intended	•	Time	befor	e har	vest	(days)				
Market	0	0 1 3 5 7 14 21									
USA											
Australia											
Canada											
China											
Codex											
EU											
Hong Kong											
Japan											
Korea											
Taiwan											

Captan										
Intended	Time before harvest (days)									
Market	0	0 1 3 5 7 14								
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

El	evat	e (F	enhe	xam	id)	Elevate (Fenhexamid)								
Intended	Time before harvest (days)													
Market	0	0 1 3 5 7 14 2												
USA														
Australia														
Canada														
China														
Codex														
EU														
Hong Kong														
Japan														
Korea														
Taiwan														

Fo	Fontelis (Penthiopyrad)											
Intended	•	Time	befor	e har	vest	(days)					
Market	0	1	3	5	7	14	21					
USA												
Australia												
Canada												
China												
Codex												
EU												
Hong Kong												
Japan												
Korea												
Taiwan												

Kenja (Isofetamid)										
Intended										
Market										
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

Luna Tranqu	uility (Fluopyram+Pyrimethanil)								
Intended	•	Time before harvest (days)							
Market	0	0 1 3 5 7 14 22							
USA									
Australia									
Canada									
China									
Codex									
EU									
Hong Kong									
Japan									
Korea									
Taiwan									

Pristine	e (Bo	scali	d+Py	raclo	stro	bin)				
Intended		Time	befor	e har	vest	(days)			
Market	0	1	3	5	7	14	21			
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

Prolivio (Pyriofenone)										
Intended	•	Time before harvest (days)								
Market	0	0 1 3 5 7 14 21								
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

Rally (Myclobutanil)										
Intended	-	Time	befor	e har	vest	(days)			
Market	0	7	14	21						
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

Key to colors used in charts:

RED means that the product should not be used during this time either because of EPA label restrictions or due to a high risk of exceeding MRLs for a given market.



YELLOW means that the product should be used with caution during this time given all the variables (e.g. tank mixes, application method and calibration, use of adjuvants, environmental conditions, and post-harvest handling) that can impact the time it takes for a residue to degrade in order to meet the MRL for a given market.

GREEN means that the product is likely to be safe for use at this time with low risk of residue remaining at harvest that would exceed MRLs for a given market.

Pre-Harvest Intervals to Comply with the Maximum Residue Limits (MRLs) of Selected Export Markets for Twelve Fungicides Registered for Use in Blackberries for the 2021 Growing Season - October 27, 2020

	Rovral (Iprodione)										
Intended	•	Time	befor	e har	vest	(days)				
Market	0	1	3	5	7	14	21				
USA											
Australia											
Canada											
China											
Codex											
EU											
Hong Kong											
Japan											
Korea											
Taiwan											

Switch	Switch (Cyprodinil+Fludioxonil)									
Intended	1	Time before harvest (days)								
Market	0	1	3	5	7	14	21			
USA										
Australia										
Canada										
China										
Codex										
EU										
Hong Kong										
Japan										
Korea										
Taiwan										

Tanos (Cymoxanil+Famoxadone)							
Intended	Time before harvest (days)						
Market	0	1	3	5	7	14	21
USA							
Australia							
Canada							
China							
Codex							
EU							
Hong Kong							
Japan							
Korea							
Taiwan							

Key to colors used in charts:

RED means that the product should not be used during this time either because of EPA label restrictions or due to a high risk of exceeding MRLs for a given market.



YELLOW means that the product should be used with caution during this time given all the variables (e.g. tank mixes, application method and calibration, use of adjuvants, environmental conditions, and post-harvest handling) that can impact the time it takes for a residue to degrade in order to meet the MRL for a given market.

GREEN means that the product is likely to be safe for use at this time with low risk of residue remaining at harvest that would exceed MRLs for a given market.

Acknowledgements: This work was made possible with funding by the Washington Red Raspberry Commission (WRRC), Oregon Raspberry and Blackberry Commission (ORBC), and USDA Technical Assistance for Specialty Crops (TASC). Field collaborators include: Joe DeFrancesco, Dani Lightle, Peter Sturman, and Gina Koskela (OSU NWREC); Beverly S. Gerdeman and G. Hollis Spitler (WSU Mount Vernon NWREC). Sample analysis and generation of these charts was done by Camille Holladay and Keith Crosby (Synergistic Pesticide Lab in Portland, OR).

Purpose & Methods: This tool was developed to aid blackberry growers in selecting materials to manage key pests close to harvest with a particular export market in mind. Selected markets have been included, some of which have more restricted maximum residue limits (MRLs) or tolerances than required by the US for particular materials. The MRLs used to develop this tool come from those published by www.bryantchristie.com as of October 27, 2020. Please check the database as MRLs are dynamic. The data used to determine whether a longer pre-harvest interval would be necessary for a given market and its published MRL are based on a single application made near the legal US max rate for each material tested in replicated trials conducted at one location each in Oregon and Washington over three years, unless otherwise noted. All samples were extracted by the QuEChERS method and analyzed by GC/MS/MS and LC/MS/MS.

Disclaimer: These charts are just a guide. The authors of this tool cannot guarantee that any of these MRLs have not changed since October 27, 2020; therefore, the user assumes all responsibility for its use subsequently. We also cannot guarantee that a material listed for use in Oregon or Washington is registered for use outside those states (pesticide registration status is determined by the US EPA and State Governments where 'special uses' are concerned). Users outside these states are cautioned to consult with their local extension service to determine what is allowable. We also make no guarantees that any of the products listed will be effective against a particular pest. Finally, given all of the variables that can affect degradation rates - in particular the use of adjuvants and tank mixes, environmental post-application conditions, and post-harvest handling - we cannot guarantee that if a product is used according to this tool it will not leave residues that exceed MRLs for the selected market.