

# Pre-Harvest Intervals to Comply with the Maximum Residue Limits (MRLs) of Selected Export Markets for Eight Fungicides Registered for Use in Blueberries for the 2020 Growing Season - December 12, 2019



Abound (Azoxystrobin)		Time before harvest						
Intended Market	Time before harvest							
	0 day	1 day	3 days	5 days	7 days	14 days	21 days	
USA	Green	Green	Green	Green	Green	Green	Green	
Australia	Green	Green	Green	Green	Green	Green	Green	
Canada	Yellow	Yellow	Green	Green	Green	Green	Green	
EU	Green	Green	Green	Green	Green	Green	Green	
Hong Kong	Green	Green	Green	Green	Green	Green	Green	
Japan	Green	Green	Green	Green	Green	Green	Green	
Korea	Green	Green	Green	Green	Green	Green	Green	
Philippines	Green	Green	Green	Green	Green	Green	Green	
Taiwan	Green	Green	Green	Green	Green	Green	Green	
Vietnam	Green	Green	Green	Green	Green	Green	Green	

Captan		Time before harvest						
Intended Market	Time before harvest							
	0 day	1 day	3 days	5 days	7 days	14 days	21 days	
USA	Red	Red	Green	Green	Green	Green	Green	
Australia	Red	Red	Green	Green	Green	Green	Green	
Canada	Red	Red	Red	Red	Red	Red	Red	
EU	Red	Red	Green	Green	Green	Green	Green	
Hong Kong	Red	Red	Green	Green	Green	Green	Green	
Japan	Red	Red	Green	Green	Green	Green	Green	
Korea	Red	Red	Green	Green	Green	Green	Green	
Philippines	Red	Red	Green	Green	Green	Green	Green	
Taiwan	Red	Red	Green	Green	Green	Green	Green	
Vietnam	Red	Red	Green	Green	Green	Green	Green	

Elevate (Fenhexamid)		Time before harvest						
Intended Market	Time before harvest							
	0 day	1 day	3 days	5 days	7 days	14 days	21 days	
USA	Green	Green	Green	Green	Green	Green	Green	
Australia	Green	Green	Green	Green	Green	Green	Green	
Canada	Green	Green	Green	Green	Green	Green	Green	
EU	Green	Green	Green	Green	Green	Green	Green	
Hong Kong	Green	Green	Green	Green	Green	Green	Green	
Japan	Green	Green	Green	Green	Green	Green	Green	
Korea	Green	Green	Green	Green	Green	Green	Green	
Philippines	Green	Green	Green	Green	Green	Green	Green	
Taiwan	Green	Green	Green	Green	Green	Green	Green	
Vietnam	Green	Green	Green	Green	Green	Green	Green	

Iprodione		Time before harvest						
Intended Market	Time before harvest							
	0 day	1 day	3 days	5 days	7 days	14 days	21 days	
USA	Green	Green	Green	Green	Green	Green	Green	
Australia	Green	Green	Green	Green	Green	Green	Green	
Canada	Red	Red	Red	Red	Red	Red	Red	
EU	Red	Red	Red	Red	Red	Red	Red	
Hong Kong	Green	Green	Green	Green	Green	Green	Green	
Japan	Green	Green	Green	Green	Green	Green	Green	
Korea	Green	Green	Green	Green	Green	Green	Green	
Philippines	Red	Red	Red	Red	Red	Red	Red	
Taiwan	Red	Red	Red	Red	Red	Yellow	Yellow	
Vietnam	Red	Red	Red	Red	Red	Red	Red	

Kenja (Isfetamid)		Time before harvest						
Intended Market	Time before harvest							
	0 day	1 day	3 days	5 days	7 days	14 days	21 days	
USA	Red	Red	Red	Red	Red	Green	Green	
Australia	Red	Red	Red	Red	Red	Yellow	Yellow	
Canada	Red	Red	Red	Red	Red	Green	Green	
EU	Red	Red	Red	Red	Red	Yellow	Yellow	
Hong Kong	Red	Red	Red	Red	Red	Green	Green	
Japan	Red	Red	Red	Red	Red	Green	Green	
Korea	Red	Red	Red	Red	Red	Green	Green	
Philippines	Red	Red	Red	Red	Red	Yellow	Yellow	
Taiwan	Red	Red	Red	Red	Red	Yellow	Yellow	
Vietnam	Red	Red	Red	Red	Red	Yellow	Yellow	

Luna Tranquility (Fluopyram + Pyrimethanil) - 1 year		Time before harvest						
Intended Market	Time before harvest							
	0 day	1 day	3 days	5 days	7 days	14 days	21 days	
USA	Red	Red	Green	Green	Green	Green	Green	
Australia	Red	Red	Green	Green	Green	Green	Green	
Canada	Red	Red	Green	Green	Green	Green	Green	
EU	Red	Red	Green	Green	Green	Green	Green	
Hong Kong	Red	Red	Red	Red	Red	Red	Red	
Japan	Red	Red	Green	Green	Green	Green	Green	
Korea	Red	Red	Green	Green	Green	Green	Green	
Philippines	Red	Red	Green	Green	Green	Green	Green	
Taiwan	Red	Red	Red	Red	Red	Red	Red	
Vietnam	Red	Red	Red	Red	Red	Red	Red	

Pristine (Boscalid + Pyraclostrobin)		Time before harvest						
Intended Market	Time before harvest							
	0 day	1 day	3 days	5 days	7 days	14 days	21 days	
USA	Green	Green	Green	Green	Green	Green	Green	
Australia	Green	Green	Green	Green	Green	Green	Green	
Canada	Green	Green	Green	Green	Green	Green	Green	
EU	Green	Green	Green	Green	Green	Green	Green	
Hong Kong	Red	Red	Red	Yellow	Green	Green	Green	
Japan	Green	Green	Green	Green	Green	Green	Green	
Korea	Green	Green	Green	Green	Green	Green	Green	
Philippines	Green	Green	Green	Green	Green	Green	Green	
Taiwan	Red	Red	Red	Yellow	Green	Green	Green	
Vietnam	Green	Green	Green	Green	Green	Green	Green	

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

**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 Blueberry Commission and Washington State Commission on Pesticide Registration. Field collaborators include: Alan Schreiber (Ag Development Group) and Tom Walters (Walters Ag Research). Sample analysis and generation of these charts was done by Camille Holladay and Keith Crosby (Synergistic Pesticide Lab).

**Purpose & Methods:** This tool was developed to aid blueberry 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 December 12, 2019. 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 three locations in Washington over three years, unless otherwise noted. Where there are two components of a product, the one with more restrictive MRLs is identified in italics. 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 December 12, 2019; therefore, the user assumes all responsibility for its use subsequently. We also cannot guarantee that a material listed for use in 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.