

Insecticides registered for use in OR and WA Blueberries for management of SWD, and considerations for their use.

Active Ingredient	Trade Name ¹	IRAC ²	Rate (lb ai/A)	PHI (days)	REI (hours)	MRL ³ USA (ppm)	MRL ³ EU/UK (ppm)	MRL ³ Canada (ppm)	MRL ³ Japan (ppm)	MRL ³ Korea (ppm)	MRL ³ Taiwan (ppm)	Residual effects (days) ⁴	Potential SWD Control ⁵
Carbaryl	Sevin	1A	1.5	7	12	3.0	0.01	7.0	7.0	0.5	0.5	10-14	G
Methomyl	Lannate	1A	0.9	3	48	6.0	0.02	6.0	1.0	1.0	2.0	7-10	E
Diazinon	Diazinon	1B	0.5	7	5 days	0.5	0.01	0.1 ^d	0.1	0.1	0.5	7-10	E
Malathion	Malathion	1B	1.25	1	12	8.0	0.02	8.0	0.5	10.0	0.01	7-10	E
Phosmet	Imidan	1B	1.0	3	24	10.0	10.0	5.0	10.0	10.0	0.02	7-10**	G-E**
Bifenthrin	Brigade	3A	0.1	1	12	1.8	0.05	0.1 ^d	0.01 ^d	0.5	1.0	10-14	E
Esfenvalerate	Asana	3A	0.05	14	12	1.0	0.02	0.1 ^d	1.0	0.0 ^d	1.0	10-14	E
Fenpropathrin	Danitol	3A	0.3	3	24	3.0	0.01	3.0	5.0	0.5	3.0	10-14	E
Pyrethrin	Pyganic*	3A	18 fl oz prod*	0	12	1.0	1.0	1.0	1.0	1.0	0.0 ^d	0	G
Zeta-cypermethrin	Mustang	3A	0.05	1	12	0.8	0.05	0.1 ^d	0.5	2.0	2.0	10-14	E
Acetamiprid	Assail	4A	0.1	1	12	1.6	2.0	1.6	2.0	1.0	0.01	1-3	F
Imidacloprid (foliar)	Provado 1.6F	4A	0.05	3	12	3.5	5.0	1.0	4.0	0.3	1.0	1-3	F
Thiamethoxam (foliar)	Actara	4A	0.06	3	12	0.2	0.05	0.2	0.4	1.0	0.01	1-3	F
Spinetoram	Delegate	5	0.09	3	4	0.25	0.2	0.5	0.01 ^d	0.1	0.2	5-7	E
Spinosad	Entrust*, Success	5	0.09	3	4	0.25	0.4	0.5	0.3	0.4	0.0 ^d	5-7	G-E

¹ Examples of trade names only. The MRLs, residual effects, and potential control also apply to products with a different trade name with the same active ingredient, but by a different manufacturer.

² Insect Resistance Action Committee: 1A = Carbamates; 1B = Organophosphates; 3A = Synthetic Pyrethroids and Pyrethrins; 4A = Neonicotinoids; 5 = Spinosyns

³ MRL = Maximum Residue Level expressed in parts per million. MRLs for these and other countries can be found at: www.mrlatabase.com

⁴ Based on field-sprayed plants and exposing adult SWD to treated leaves in the lab; field results may differ. See full article at: <http://wileyonlinelibrary.com> (search for: DOI 10.1002/ps.2242)
Additional information from Washington State University lab experiments can be found at: www.mtvernon.wsu.edu/ENTOMOLOGY/pests/SWD.html

⁵ E = 90-100% mortality; G = 70-90% mortality; F = 50-70% mortality. Based on lab experiments; field results may differ. Does not include potential negative impacts on IPM programs.

^d No MRL exists. The default MRL for that country applies, which is listed here.

* Approved for organic production. Pyrethrin rate is for Pyganic EC 5.0 formulation.

** Grower testimony only (no field or lab data available)

For bee safety information, consult label or publication "How to Reduce Bee Poisoning from Pesticides" at: <http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/20772/pnw591.pdf>

Considerations:

- ~ Make application only when trap count indicates adults are present AND fruit is susceptible (i.e. fruit has started to turn color). Thorough coverage is essential to achieve control.
- ~ Rotate insecticide chemical classes (see IRAC) to reduce likelihood of resistance.
- ~ Consider other pests that may also be controlled when choosing an insecticide for SWD.
- ~ Be mindful of protecting bees and other beneficial organisms; all insecticides listed above will impact IPM programs and beneficial arthropods.
- ~ Aerial applications may result in reduced control compared to ground applications. All above product labels allow aerial application EXCEPT diazinon.
- ~ Be aware of buffer restrictions, surface water hazard, PHIs, REIs. Consider MRLs if fruit is destined for export market.
- ~ Additional information can be found in the PNW Insect Management Handbook (<http://uspest.org/pnw/insects>) and on the OSU website: www.spottedwing.com

This table is a guideline and not a legal document. Changes in registration status may occur. Consult the pesticide label before application. The label is the law.

For further information, contact Joe DeFrancesco, Oregon State University

July 15, 2013