

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 (hrs)	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	2.0	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	17 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	0.3	0.01	1-3	F
Imidacloprid (foliar)	Provado 1.6F	4A	0.05	3	12	3.5	5.0	3.5	4.0	0.3	1.0	1-3	F
Thiamethoxam (foliar)	Actara	4A	0.06	3	12	0.2	0.05	0.2	0.5	1.0	0.01	1-3	F
Spinetoram	Delegate	5	0.09	3	4	0.25	0.05	0.5	0.5	0.2	0.2	5-7	E
Spinosad	Entrust*, Success	5	0.09	3	4	0.25	1.5	0.5	0.3	1.0	0.0 ^d	5-7	G-E
Cyantraniliprole	Exirel	28	0.10	3	12	4.0	0.01 ^d	4.0	4.0	0.7	0.0 ^d	7-10***	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; 28 = Diamides

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)

*** Based on field trail results from Michigan State University

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

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