

Insecticides registered for use in OR and WA Strawberries 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	4.0	0.01	7.0	7.0	0.5	0.5	10-14	G
Endosulfan	Thionex	2A	1.0	EC = 4 WP = 12	EC = 2 days WP = 12 days	2.0	0.05	1.0	0.5	0.2	0.01	?	F
Diazinon	Diazinon	1B	0.5	5	3 days	0.5	0.01	0.75	0.1	0.1	0.5	7-10	E
Malathion	Malathion	1B	2.0	3	12	8.0	0.02	8.0	0.5	0.5	0.01	7-10	E
Bifenthrin	Brigade	3A	0.1	0	12	3.0	0.5	0.1 ^d	2.0	1.0	2.0	10-14	E
Fenpropathrin	Danitol	3A	0.3	2	24	2.0	2.0	2.0	5.0	0.5	1.0	10-14	E
Pyrethrin	Pyganic*	3A	17 fl oz prod*	0	12	1.0	1.0	0.1 ^d	1.0	1.0	0.0 ^d	0	G
Acetamiprid	Assail	4A	0.1	1	12	0.6	0.5	0.6	3.0	1.0	1.0	1-3	F
Imidacloprid (foliar)	Provado 1.6F	4A	0.04	7	12	0.5	0.5	0.5	0.5	0.3	1.0	1-3	F
Thiamethoxam (foliar)	Actara	4A	0.05	3	12	0.3	0.5	0.3	2.0	1.0	0.01	1-3	F
Spinetoram	Radiant	5	0.08	1	4	1.0	0.2	0.7	2.0	0.1	0.5	5-7	E
Spinosad	Entrust*, Success	5	0.09	1	4	1.0	0.3	0.7	1.0	1.0	1.0	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; 2A = Organochlorines; 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.mrl-database.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.

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.