Insecticides registered for use in OR and WA Caneberries 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	12.0	0.01	10	10.0	0.5	0.5	10-14	G
Diazinon	Diazinon	1B	1.0	7	5 days	0.75	0.01	0.1[d]	B=0.1;R=0.2	B=0.1;R=0.2	0.5	7-10	E
Malathion	Malathion	1B	2.0	1	12	8.0	0.02	8.0	8.0	0.5	0.01	7-10	E
Bifenthrin	Brigade	3A	0.1	3	12	1.0	1.0	1.0	1.0	1.0	1.0	10-14	E
Esfenvalerate	Asana	3A	0.05	7	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	12.0	0.01	12.0	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	0.5	0.1[d]	0.5	B=2.0;R=0.5	2.0	10-14	E
Acetamiprid	Assail	4A	0.1	1	12	1.6	2.0	4.0	2.0	B=0.3;R=1.0	1.0	1-3	F
Imidacloprid (foliar)	Admire Pro	4A	0.05	3	12	2.5	5.0	2.5	4.0	B=0.3;R=0.5	1.0	1-3	F
Thiamethoxam (foliar)	Actara	4A	0.05	3	12	0.35	0.05	0.5	0.5	1.0	0.5	1-3	F
Spinetoram	Delegate	5	0.09	1	4	0.8	B=0.05;R=0.8	0.5	B=0.7;R=0.8	0.05	B=0.01;R=0.5	5-7	E
Spinosad	Entrust*, Success	5	0.09	1	4	1.0	1.5	0.5	1.0	B=1.0;R=0.5	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; 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.mrldatabase.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.

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