

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

| Active Ingredient     | Trade Name <sup>1</sup> | IRAC <sup>2</sup> | Rate (lb ai/A) | PHI (days) | REI (hrs) | MRL <sup>3</sup> USA (ppm) | MRL <sup>3</sup> EU/UK (ppm) | MRL <sup>3</sup> Canada (ppm) | MRL <sup>3</sup> Japan (ppm) | MRL <sup>3</sup> Korea (ppm) | MRL <sup>3</sup> Taiwan (ppm) | Residual effects (days) <sup>4</sup> | Potential SWD Control <sup>5</sup> |
|-----------------------|-------------------------|-------------------|----------------|------------|-----------|----------------------------|------------------------------|-------------------------------|------------------------------|------------------------------|-------------------------------|--------------------------------------|------------------------------------|
| 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 <sup>d</sup>              | 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                          | 0.1 <sup>d</sup>              | 1.0                          | 1.0                          | 1.0                           | 10-14                                | E                                  |
| Esfenvalerate         | Asana                   | 3A                | 0.05           | 7          | 12        | 1.0                        | 0.02                         | 0.1 <sup>d</sup>              | 1.0                          | 0.0 <sup>d</sup>             | 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 <sup>d</sup>              | 0                                    | G                                  |
| Zeta-cypermethrin     | Mustang                 | 3A                | 0.05           | 1          | 12        | 0.8                        | 0.5                          | 0.1 <sup>d</sup>              | 0.5                          | 2.0                          | 2.0                           | 10-14                                | E                                  |
| Acetamiprid           | Assail                  | 4A                | 0.1            | 1          | 12        | 1.6                        | 2.0                          | 4.0                           | 1.6                          | B=0.3;R=1.0                  | 0.01                          | 1-3                                  | F                                  |
| Imidacloprid (foliar) | Provado 1.6F            | 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                          | 0.01                          | 1-3                                  | F                                  |
| Spinetoram            | Delegate                | 5                 | 0.09           | 1          | 4         | 0.7                        | 0.05                         | 0.5                           | B=0.7;R=0.8                  | B=0.1;R=0.8                  | B=0.0 <sup>d</sup> ;R=0.5     | 5-7                                  | E                                  |
| Spinosad              | Entrust*, Success       | 5                 | 0.09           | 1          | 4         | 0.7                        | 1.5                          | 0.5                           | 0.7                          | B=1.0;R=0.5                  | 0.0 <sup>d</sup>              | 5-7                                  | G-E                                |

<sup>1</sup> 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 .

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

<sup>3</sup> MRL = Maximum Residue Level expressed in parts per million. MRLs for these and other countries can be found at: [www.mrlatabase.com](http://www.mrlatabase.com)

<sup>4</sup> 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](http://www.mtvernon.wsu.edu/ENTOMOLOGY/pests/SWD.html)

<sup>5</sup> 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.

<sup>d</sup> 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](http://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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