Cultural Control Continued...
- Remove or bury cull fruit. Keep equipment and processing areas free of old fruit.
- Good field care: decrease humidity in field with adequate pruning and weed control.
- Be aware of host plants in adjacent fields and encourage neighbours to manage SWD.
- Overripe fruit are more likely to be infested with SWD. Pick early, clean and often.

Chemical Control
Control with insecticides will be necessary if trapping shows that adult SWD flies are present in the area when berries begin to ripen. Adult flies are the target and are killed by direct spray contact or when they are exposed to residues of insecticide on the treated fruit and leaves.

Minimum re-application interval: 7 days for all products except Entrust and Exirel, which are 5 days. Re-entry interval: 12 hours for all products.

Full Pesticide Registrations for SWD: Read the product labels for complete user instructions.

Exirel Insecticide (Cyantraniliprole) 1000-1500 mL/ha product in 200 L/ha water volume. Registered for Blueberry (Bushberry Group), PHI is 3 days, Raspberry, Blackberry (caneberries, CG 13-07A), PHI is 1 day. Do not apply more than 4 times per season.

Delegate WG (spinetoram) at 315 to 420 g/ha (126 to 168 g/acre) for blueberry, raspberry and blackberry and at 280 g/ha (112 g/acre) for strawberry. Do not apply more than 3 times per season. Blueberry PHI: 3 days. Raspberry/Strawberry/Blackberry PHI: 1 day.

Entrust SC (spinosad) at 333 to 444 mL/ha (133 to 178 mL/acre) for berry crops except Strawberry, which is 292-364 mL/ha. Do not apply more than 3 times per season. Blueberry, Raspberry, Strawberry, Blackberry PHI: 1 day. Entrust is OMRI certified.

Capture 240 EC (bifenthrin) 300-450 mL/ha (120 to 180 mL/acre). Label expansion for blueberries only. Maximum 2 applications per year. PHI: 3 days. Note: the use of Capture 240 EC on blueberries will phase out. Last day of permitted use by growers is December 31, 2020.

Emergency Registrations for SWD: Read the product labels for complete user instructions.

Mako EC (cypermethrin) (FORMERLY RIPCORD) at 150 mL/ha (60mL/acre). Registered for use between June 1 and November 30, 2018, on caneberries and strawberries. Not Registered for Blueberries. Do not apply more than once per season. PHI: 2 days. The maximum residue limit for Mako in Canada is 0.1 ppm. Consult with your packer before using Mako.

Malathion 85E (malathion) at 1.0 L/1000 L of water. Registered for use on all berry crops, between June 1 and November 30, 2018. Malathion works best if the temperature is 20°C or higher. Maximum applications: 2 per year on all berry crops except blueberry, which is 3 per year. Strawberry PHI: 3 days. Blueberry PHI: 2 days. Raspberry/Blackberry PHI: 1 day.

Further Information:
- B.C. Ministry of Agriculture at 604-556-3001, and http://www.gov.bc.ca/planthealth
- Oregon State University: http://spottedwing.org/
- Washington State University: http://extension.wsu.edu/skagit/agriculture/pestcontrol/swd/

INFORMATION FOR BERRY PRODUCERS 2018
Updated June 29, 2018

S. Fitzpatrick, AAFC

Spotted Wing Drosophila (Drosophila suzukii), in British Columbia

Pile of culled blueberries
**Spotted wing drosophila (SWD)** is a small fly that can cause significant damage in berry and tree fruit crops.

**Identification:**

Adult flies are brown, 2-3 mm long with red eyes and clear fly-like wings. Male flies have black spots on the end of each wing. Females have no spots, but have a saw-like egg laying device (ovipositor) which enables them to cut into fruit and lay eggs inside.

**Life Cycle:**

Spotted wing drosophila overwinters as adult flies. In spring, flies become active, mate and lay eggs in ripening fruit. A generation can take 8-21 days, depending on temperature. Up to 4 generations per year are expected in British Columbia.

**Damage:**

Unlike most small flies which infest decaying fruit, SWD females lay their eggs inside ripe fruit before harvest. Larvae hatch and begin to feed within the fruit, causing softening and fruit collapse. Contaminated fruit is unmarketable.

**Management:**

**Cultural Control**

- Alternate hosts near crop fields should be controlled or mowed to prevent fruiting.

**Hosts:**

Numerous crops can be infested with SWD, including blueberry, raspberry, strawberry, blackberry, cherry, peach and grape. Alternate non-crop hosts can include blackberry, other berries and seedling cherry.