Spotted Wing Drosophila (Drosophila suzukii)
A new vinegar fly pest in British Columbia

Management:
Good sanitation practices are critical to controlling spotted wing drosophila.
- Clean up leftover and fallen fruit. Seal fruit in plastic bags or freeze for at least 48 hours before disposal.
- Home composting of infested fruit will not kill flies.
- It is recommended that local grocers dispose of rotting fruit by sealing in plastic bags before disposal, or put all rotten fruit through a garborator.

Harvest on time, pick clean and often as overripe unharvested fruit serve as sources of infestation.

Refrigerate fruit as soon as possible.

Insecticides containing pyrethroids or malathion registered for control of other fruit pests in the home garden will provide control of spotted wing drosophila. Read and follow label directions and do not apply when bees are present.

Contact a commercial pesticide applicator for other chemical control options.

Further Information:
- B.C. Ministry of Agriculture:
  http://www.al.gov.bc.ca/cropprot/swd.htm
- Oregon State University:
  http://swd.hort.oregonstate.edu/

Surveillance:
Surveillance of spotted wing drosophila in B.C. from 2010-2013 indicates that:
- Spotted wing drosophila is present in B.C.
- Adults are present from May to November; with very high numbers recorded from late July to November.
- More adult females flies are present early in the season. It is therefore very important to identify female flies during monitoring.

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Contacts:
Interior B.C.: Susanna Acheampong PhD
Email: Susanna.Acheampong@gov.bc.ca
Phone: (250) 861 7681

Coastal B.C.: Tracy Hueppelsheuser, P.Ag.
Email: Tracy.Hueppelsheuser@gov.bc.ca
Phone: (604) 556 3031
Spotted Wing Drosophila

Spotted wing drosophila, a vinegar fruit fly pest was first detected in California in 2008 and in Florida, Oregon and Washington in 2009. In September 2009, spotted wing drosophila was confirmed in berries in the Fraser Valley area of British Columbia and cherries in the Central Okanagan Valley.

**Identification:**

Spotted wing drosophila adults are light yellow or brown flies with red eyes, about 2 - 3 mm long. They look like regular vinegar flies but male flies have a single black spot on the end of each wing. Females have no spots, but have a distinctive saw-like egg laying device (ovipositor) which enables them to cut into thin-skinned fruit and deposit eggs inside.

**Hosts:**

Known hosts in B.C. include cherry, peach, plum, nectarine, apricot, strawberry, blueberry, blackberry, raspberry, mulberry, salmonberry, thimbleberry, fig, table grape, Oregon grape, currant, elderberry and honeysuckle.

**Damage:**

Unlike most vinegar flies which normally infest overripe, fallen, decaying fruit, spotted wing drosophila females lay their eggs inside intact ripening fruit. Larvae hatch and begin to feed within the fruit, causing softening in the area of feeding. Fruit contaminated with larvae become soft and unmarketable.

There can be several larvae in a fruit, which hastens softening and fruit collapse. Pin prick sized holes from the females’ egg laying and larvae activities are evident within the soft areas of infested fruit. These holes provide entry points for disease-causing organisms.

**Monitoring:**

- Monitor adult flies from mid-May.
- Any 250 - 750 ml plastic container or cup with a tight fitting lid can be used to make a trap for capturing and monitoring adult flies.
- Drill 4 - 5 holes (use a 3/16 inch drill) on one side of the container to allow flies to enter (holes shouldn’t be too big or other large insects can get in). Containers that already have holes, like commercial Con-tech fruit fly traps will work.
- Add about 1½ inch (4 cm) pure apple cider vinegar or a mixture of 2 parts apple cider vinegar to 3 parts red wine to the trap.
- Hang trap near fruit level or place on the ground in a shaded area.
- Replace bait once a week and look for male flies (a black spot on each wing) in the bait solution.
- Do not dump the old bait solution on the ground as this will attract more flies.
- Use a magnifying glass or hand lens to help identify male flies.
- Female flies are more difficult to identify. Send suspect flies to the Ministry of Agriculture office for identification.

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