



High Risk / Impact in all
regions of the Okanagan

Limited population with significant
potential to spread in the region.

Spotted Wing Drosophila

Drosophila suzukii

DESCRIPTION

- Temperate fruit fly
- Adults: 2-3 mm (1/8 inch) long, brownish with red eyes and clear fly-like wings
- Eggs are 0.6 mm long, oval, white, 2 filaments at one end
- Larvae are legless, headless, up to 6 mm long at maturity, white or transparent
- Pupa are 3 mm long, brown, football-shaped, two stalks with small finger-like projections on one end

Compared to other fruit flies, spotted wing drosophila is a robust fly, but this is difficult to discern unless compared directly to other species. Many features are typical for *Drosophila* fruit flies, with a few key differences.

Male and female characteristics are key identifiers for this species. Males have a black/grey spot on the end of each wing, as well as two black 'combs' or bands on the front legs. The females do not have spots

or leg bands. Females have saw-like ovipositors that are used to cut into fruit skin. Ovipositors are easier to see when extended. A hand-lens or dissecting microscope is needed to confirm ovipositor presence.

Spotted wing drosophila emerging in the fall overwinter as adult flies. In spring flies become active, mate, and lay eggs in ripening fruit. Spotted wing drosophila adults are spread by wind to nearby locations, and over long distances through the transportation of infested fruit to new regions.

HABITAT

Spotted wing drosophila is native to Southeast Asia, preferring temperatures of 20-30 °C. It was first identified in British Columbia in 2009. It is now widespread in Coastal and Interior fruit growing areas of B.C. In BC, spotted wing drosophila has been confirmed infesting wild and cultivated raspberry and blackberry, blueberry, strawberry, cherry, peach, nectarine, apricot, plum, and suspected in hardy kiwifruit. In Interior B.C, wild hosts confirmed include Oregon grape (*Mahonia* sp.), blue elderberry (*Sambucus cerulean*), Northern black currant (*Ribes hudsonianum*), Tatarian honeysuckle (*Lonicera tatarica*), Mahaleb cherry (*Prunus mahaleb*), and golden currant (*Ribes aureum*) (H. Thistlewood, AAFC, Summerland).



Dr. S. Fitzpatrick

Spotted Wing Drosophila

IMPACT AND RISKS

- Spotted wing drosophila is known to infest thin-skinned fruit.
- Females lay their eggs inside sound fruit before harvest with their saw-like ovipositor.
- This contaminates fruit with larvae, and causes it to become soft and unmarketable.
- Larvae hatch and feed within the fruit, causing softening in the area of feeding.
- There can be several larvae in a fruit.
- Holes the size of pin pricks are evident within the soft areas of infested fruit.
- These holes result from egg laying and are used as breathing holes by larvae.
- In addition, these holes provide entry points for diseases such as brown rot and botrytis.

PREVENTION AND MITIGATION

Management recommendations include:

- Registered insecticides.
- Good harvest and sanitation practices, such as culling soft fruit, destroying culls, and keeping processing areas and equipment free of old fruit.



Project funding and support provided by:



Climate Action Initiative
BC AGRICULTURE & FOOD

