

# Spotted wing drosophila



EXOTIC PEST – CALL THE EXOTIC PLANT PEST HOTLINE IF SUSPECTED

## What is the spotted wing drosophila?

Spotted wing drosophila (SWD, *Drosophila suzukii*) is a pest that originated in South East Asia, but has since spread throughout North America and Europe. SWD is a small fly that attacks a range of soft skinned fruit and reduces crop yield and quality through direct feeding damage and secondary infection of the fruit. This pest has a significant impact on fruit production as the larvae feed on maturing fruit, not just over-ripe or decaying fruit.

The preferred hosts for eggs laid in healthy fruit include grapes, berries, cherries, nectarines and plums. Apples, pears and other fruit with thicker skins are also hosts when fruit begins to rot.

Recent research suggests that there is a different risk of damage from SWD depending on the *Vitis* species or parentage of variety grown. For instance, oviposition (egg laying) is frequently recorded from both table grape and wine grape varieties that have predominantly *Vitis vinifera* parentage. In contrast, other varieties such as those with *V. labrusca* as the sole parent have not been recorded to be an oviposition host for SWD. It is also believed that SWD prefer grape varieties with a thin skin.

## What does it look like?

Adult SWD are 2–3 mm long with a wing span of around 6–8 mm. They are yellow-brown with dark bands on the abdomen and prominent red eyes. Females have a distinct double serrated ovipositor that is used to puncture the intact skin of suitable fruit and lay eggs. Males are typically smaller than females, and can be distinguished from females by the small dark spots on the end of their wings.

Larvae are cream or white and about 3 mm long. Pupae are red to brown, 2–3 mm in length by 1 mm wide and are cylindrically shaped. The pupae have distinctive pairs of horn-shaped protrusions, which further divide into 7–8 branches which are their respiratory organs.

## What can it be confused with?

Adult SWD look almost identical to the regular vinegar fly (*D. melanogaster*). SWD are distinguished from other *Drosophila* species present in Australia by the black spot on the wing tips in males.



Adult males are yellow-brown with dark abdominal bands, red eyes and distinct spots on the ends of their wings

Martin Hauser, California Department of Food and Agriculture



Adult females are yellow-brown with dark abdominal bands, red eyes and no spots on their wings

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## What should I look for?

Infested fruit show small scars and indented soft spots on the surface, which is left by the 'stinging' (ovipositing) females. Larval feeding results in the fruit collapsing around the feeding site. If the SWD attack rates are high, the entire fruit can collapse. The oviposition scar also exposes the fruit to secondary attack by pathogens and other insects.

Detection of SWD, as with a number of other insect pests that attack fruit, can occur following detection of fruit rot caused by secondary infection by moulds and bacteria.

Although SWD preferentially attack fruit prior to harvest, they can also attack harvested fruits. Look for signs of SWD on fresh fruit in packing houses.

## How does it spread?

Adult SWD can spread throughout a crop by flight, but longer distance dispersal occurs through movement of plant material (primarily fruit) infested with eggs or larvae.

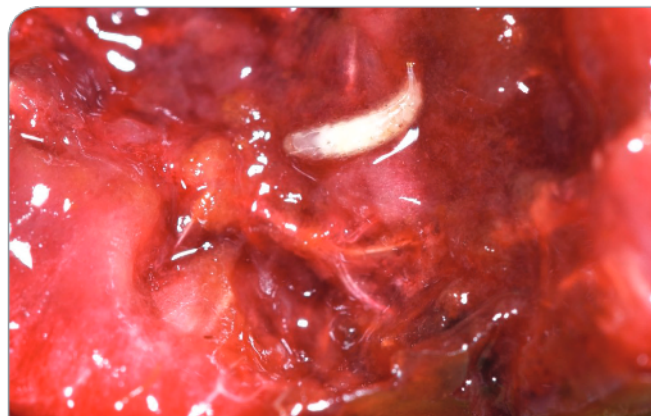
## Where is it now?

SWD are native to South East Asia but have spread to become a pest throughout Asia, North America, South America, Europe, the United Kingdom, the Middle East, French Polynesia, Mexico, Morocco, and Russia.

## How can I protect my vineyard from the spotted wing drosophila?

Check your vineyard frequently for the presence of new pests and for unusual symptoms. Make sure you are familiar with common grapevine pests so you can tell if you see something different. Keep records of anything unusual and ensure all staff and visitors adhere to on-farm biosecurity and hygiene practices.

If you see anything unusual, call the **Exotic Plant Pest Hotline** on **1800 084 881**.



Spotted wing drosophila larvae in fruit

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