Qfly Lifecycle and ID

Know your pest
To produce clean, marketable fruit

Adult Qfly

The adult Qfly can be up to 8 mm long, with a red to dark brown body. The fly has a narrow waist between the thorax and the abdomen, and the thorax is patterned with cream to yellow shoulder markings and stripes. The wings are transparent. The female can be identified by the ovipositer, or ‘sting’ at the base.

Qfly can overwinter as adults, becoming active again as temperatures increase. After emerging from pupae, or from overwintering, protein and sugar sources are required for sexual maturation, and egg maturation after mating. Flies can occasionally been seen walking around plants early in the morning looking for protein, but rest during the hottest part of the day, usually within leafy canopies. Mating occurs at dusk and female flies generally only mate once, but can mate multiple times.

Eggs are laid about 2 days post-mating with up to 20 eggs being laid into maturing fruit still on the tree or vine, not rotten fruit on the ground**. Adults can live for several months, depending on environmental conditions and food availability**.

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Eggs

Eggs are not easily visible as they are deposited within fruit, often laid just beneath the surface of the fruit under the skin. There is a small mark left on the fruit, called a sting. Eggs are small (up to 1mm), cream to white in colour and banana-shaped. **Eggs hatch within a few days**.

Larvae

Once hatched, larvae remain in, and feed on, the fruit. There are three larval stages; larvae grow from about 1mm to 10mm. Colour develops with time to a creamy white. Larvae are legless, can sometimes have a dark stripe running the length of the body. The body tapers at one end where the darkened and hardened hooklike mouthparts are present. These cutting mouthparts help tear pieces of the fruit that are small enough to swallow. The larvae feeds towards the centre of the fruit, meaning that damage inside the fruit is often not immediately visible from the outside. During this time fruit may fall from the tree or vine with larvae still inside. Once larvae development is complete, the larva leaves the fruit and burrows into the soil. **Larval development can occur in as little as 1 week if conditions are optimal**.

Pupae

Once the larva leaves the fruit, it drops to the ground to pupate in the soil. The pupal shell is brown. The pupa then develops into an adult fly ready to emerge when environmental conditions are suitable. Larval and pupal stages can be completed in as little as 2 week's duration depending on temperature. **The adult flies may emerge from the pupae in as little as seven days during the summer**.
Don't forget some adults emerging before winter will overwinter as adults.

Photos: M. Hill, AHR Fruit Fly booklet, NSW DPI

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