

Fact Sheet 4 - Queensland Fruit Fly

Information provided courtesy of Department of Primary Industries and Regional Development

Queensland fruit fly (Qfly, *Bactrocera tryoni*) is considered to be one of the most serious pests of fruit and vegetables in Australia. It is found in the eastern states and is a declared pest in Western Australia (WA) that needs to be eradicated if found. This article describes Qfly's impacts to horticultural industries and backyard gardeners in WA and how to report it.

Qfly is an Australian fruit fly native to the tropical and subtropical rainforests of Queensland and northern New South Wales. Over time, the clearance of forests for cultivation of fruits and fruiting vegetables and the introduction of exotic fruits has resulted in Qfly increasing its host range and distribution into urban and horticultural areas in Queensland, New South Wales, Victoria and the Northern Territory.

The expansion of irrigated agriculture and proliferation of backyard gardens has also allowed Qfly to spread into drier and cooler areas outside its native habitat.

Outbreaks are most likely to occur from November to May after periods of rain or high humidity, but some activity may continue during cooler months of the year.

Western Australia, South Australia and Tasmania are free of Qfly.

Agricultural and economic impact

Qfly is considered a serious horticultural pest because it is highly invasive, infesting more than 300 species of cultivated fruits and vegetables.

Economic losses are estimated at \$300 million which includes control and loss of production, postharvest treatments, on-going surveillance for area freedom and loss or limit to domestic and international markets.

Symptoms of damage

Damage occurs as the larvae develop and feed from within fruit. Adult female flies sting fruit and fruiting vegetables to lay eggs. This introduces bacteria and the fruit starts to rot. Affected fruit may show skin discolouration around the sting marks; fruit decompose rapidly, inducing decay and early fruit drop.

Qfly damage to fruit is more severe during mid and late summer than at other times.

Description

Adult	The body has three segments and is about 6-8 mm long. The head has two red eyes with two very short antennae (only visible under close inspection). The thorax (middle segment) is reddish-brown with yellow patches on the sides and back. The abdomen (end segment) is a solid dark brown. The legs are a lighter shade of brown and the wings are clear.
Eggs	White 1mm banana-shaped eggs.
Maggot (larva)	Cream-coloured maggots hatch from each egg, reaching about 7mm long when mature.
Pupa	Mature larvae change into an oval, brown hard pupa.

Life cycle

Eggs: female lays eggs just under the surface of the fruit. One Qfly can lay up to 100 eggs a day.

Larvae: the maggots or larvae hatch from the egg after two to three days and start feeding on the fruit. Larvae quickly grow from 1mm to 1cm long when mature.

Pupa: the fully grown larva jumps from the fruit and drops to the ground tunnelling into the soil. In the soil, larvae become inactive and changes into a barrel-shaped pupa.

Adult: the adult Qfly emerges from the ground. After feeding and mating, females search for suitable ripe fruit to lay their eggs inside, restarting the cycle.

The life cycle is more rapid when temperatures are high. In summer, Qfly can develop from egg to adult in three weeks. Adult flies can live for months.

Qfly or Medfly?

Don't confuse Qfly for Mediterranean fruit fly (Medfly).



Queensland fruit fly has a red-brownish torso with yellow patches, a dark brown abdomen and clear wings.



Mediterranean fruit fly has a torso with black and silver patches, an orange-brown abdomen with two lighter rings, and mottled wings.

The eggs and larvae of Qfly and Medfly look identical and cannot be easily distinguished from one another. Refer to the **Medfly** web pages at DPIRD for more identifying information.

Report Queensland fruit fly (Qfly) to the Department of Primary Industries and Regional Development, Pest and Disease Information Service (PaDIS) by phone on (08) 9368 3080 or by email at padis@dpird.wa.gov.au

Samples or photos of adult flies caught in fruit fly traps or photographed on the fruit can be submitted for identification and screening. The presence of white larvae in green tomatoes, unripe fruit, and passionfruit is worth reporting so we can screen for Qfly as Medfly larvae are not often found in these.

Please take photos where ever possible and report to:

MyPestGuide™ Reporter
via app or online

mypestguide.agric.wa.gov.au

Pest and Disease Information Service
(08) 9368 3080

padis@dpird.wa.gov.au

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Contact information

All public enquiries should be directed to Pest and Disease Information Service (PaDIS) at the Department of Primary Industries and Regional Development, Agriculture and Food Division.

PaDIS Phone [08] 9368 3080

PaDIS email: padis@dpird.wa.gov.au