

Information about sterile fruit fly releases

Sterile Queensland fruit flies (QFF) can be released in appropriate areas as an extra method of controlling a fruit fly outbreak. This method is known as Sterile Insect Technique (SIT). Sterile QFF releases are usually conducted in conjunction with other management activities, such as baiting or suppression blocks.

How does SIT work?

Large numbers of sterile QFF are released in an outbreak area to outnumber the existing ('wild') QFF population. This means that wild female flies are much more likely to mate with a sterile male, in which case no fertile eggs will be produced and no maggots will emerge to damage fruit. Breaking their life cycle in this way will help to limit the spread of QFF.

How many sterile flies are released at a time?

Over 500,000 flies may be released in an outbreak area per week, across a number of release sites. It is intended that there should be 60,000 sterile flies released per square km per week.

How many sterile fly releases are needed for SIT to be effective in one area?

Sterile fruit fly releases may continue for 12 weeks after the last wild fly has been caught. This is because wild female flies can live for several months, but sterile flies have a short lifespan.

Are there other benefits in using SIT?

The use of SIT is environmentally friendly. It also does not require DPI officers to enter private properties, except for properties where surveillance traps are installed.

How are sterile flies produced?

Stocks of QFF are raised at a facility in New South Wales. When the life cycle reaches the pupal stage (between maggot and adult fly), the pupae are sterilised by irradiation. They are then sent to a DPI Victoria facility, where they are raised to the adult fly stage and prepared for release.

Do sterile fruit flies look any different to wild flies?

Sterile QFF are unlikely to be noticed by the general public. However, before they are released, sterile QFF are stained with a pink dye. The dye may not be seen with the naked eye, but any sterile flies are caught in a trap can be distinguished from wild flies in a laboratory.

Will the large numbers of sterile QFF cause a nuisance?

Only QFF maggots affect fruit, so the added numbers of flies will not affect any fruit in the release area. Although released in large numbers, sterile QFF generally disperse quickly and, once this has happened, they are unlikely to be noticed.

Are sterile flies a health risk?

Sterile Queensland fruit flies present no health risk to humans, other animals, or plants.

Has SIT been used elsewhere?

SIT has been used in South Australia and also in other countries including South Africa, Chile, Argentina, Israel, Mexico and the USA.

If you would like to receive this information/publication in an accessible format (such as large print or audio) please call the Customer Service Centre on 136 186, TTY 1800 122 969, or email customer.service@dpi.vic.gov.au.

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