New Qfly season underway

Background

The Greater Sunraysia Pest Free Area (GSPFA) has 1150 cue-lure traps deployed in 77 localities, covering a total area of about 10,500km^2 for monitoring the presence, or absence, of the serious fruit and vegetable pest, Queensland fruit fly (Qfly).

The number of Qfly trapped, as well as their timing and location, warn of Qfly population build-up and incursions for the notification of stakeholders and strategic consequent management of the pest.

Within the GSPFA, there are 953 traps in Victoria and 197 in NSW. They are serviced by the Victorian Department of Jobs, Precincts and Regions (DJPR). Traps are placed out in urban, peri-urban and rural sites, and trapped flies are collected, identified and recorded every fortnight. There are 297 traps in urban sites, 121 in peri-urban locations and 732 in rural sites.

Trends in fly numbers

Qfly trapping rates across the GSPFA bottomed out in July 2020, with a total collection of 750 Qfly from the trapping grid (80 per cent of traps caught 0 Qfly). The number crept up in August to 1337 (73 per cent of traps caught 0 Qfly) and increased significantly in September to 4946 (only 53 per cent of traps caught 0 Qfly). September is the start of the spring peak of Qfly populations in the GSPFA.

Current fly behaviour

September/October is always the start of a new Qfly season. At this time, morning temperatures reach about 13˚C to 15˚C, allowing Qfly the freedom to fly around and disperse into orchards and home gardens.

These flies were able to find suitable refuge during the cold GSPFA winter and survive. They are the survivors which may be the cause of the coming season's fruit fly problems if not kept in check.

Be on the lookout for early ripening fruit such as loquats and mulberries, or late-hanging fruit like navel oranges and persimmons. They will be targeted by fruit flies during the spring peak. Please remove them.

What is the spring peak?

This is the time when many of the adult Qfly that survived the winter come out of their slow-moving winter mode and, with increasing day temperatures, start to fly around looking for protein, and then mates, and then fruit to lay their eggs into. Males are attracted to traps at this time. One to three days after they mate, the females lay eggs in early season fruit. Then these adults die out.

Not many Qfly are trapped in late October/early November because, by that time, the adults have all gone, leaving their young – the first generation of the new fruit fly season – in fruit, as eggs and larvae, or in the soil as pupae.

Qfly mate when the temperature at sunset reaches about 15°C to 16°C. In many parts of the GSPFA, this has happened already (see Table 1).

Seasonal advice

It is unlikely that commercial growers, outside of urban locations, will have problems with Qfly right now because numbers in rural traps are very, very low. However, if you live within about 1km of the hot spot towns shown below, it would be very wise to ensure you have removed all unwanted fruiting material and have stocked up on traps, baits and pesticides. Also make sure any pesticides you have in storage are within their use-by dates and are still approved for use in your state and your fruit type.

Important: Don't forget to check for Qfly in your house garden because it may have survived the winter by finding refuge in evergreen plants in warm spots near the house or packing/machinery shed. Many rural sites in the GSPFA have trapped Qfly in the spring – well before bearing in their commercial orchards.

Three-month weather outlook – Nov 2020 to Jan 2021

The optimum winter weather situation for Qfly survival into spring is for October to receive above-average rainfall and above-average maximum and minimum temperatures. This situation occurred in the winter of 2016, resulting in extremely high spring, summer and autumn Qfly populations all over the central and northern parts of Victoria. It looks like this situation will occur again in 2020/21.

Qfly populations in the GSPFA will increase from October 2020 due to forecast higher than normal rainfall and minimum temperatures.

Weather patterns forecast for November 2020 to January 2021, provided by the Bureau of Meteorology, show a greater than 75 to 80 per cent chance of rainfall being higher than the normal amount of rain received in this period (50mm to 100mm).

Maximum temperatures have an even chance (45 to 55 per cent) and minimum temperatures have a high chance (greater than 80 per cent) of being higher than the medians of 30°C to 33°C (maxima) and 15°C to 18°C (minima).

Warmer than normal minimum temperatures plus extra rainfall means that there will be more fruit and more fruit flies in the GSPFA this coming season. However, if home gardeners and growers have been managing fruit flies adequately, this trend will be reversed.

There have been several days across the GSPFA where sunset temperatures have exceeded 15°C. Table 1 shows that Qfly could have mated up to 50 per cent of days in September. This means that adults surviving the previous winter, who need to mate, may have mated by now – providing that they can find each other.

Successful area-wide management programs and home-garden fruit fly control ensure that surviving flies are few in number and dispersed widely from each other.

These surviving flies lay into susceptible fruit in the spring, and their offspring – the first generation for 2019/20 – emerge as new adults in December. These flies damage home garden fruit and vegetables and produce a new, second generation in January/February. These flies are the ones that move from urban gardens into rural orchards.

October/November is the time to continue checking fruit for sting marks, setting traps for monitoring purposes, and ensuring you have adequate Qfly control material in stock and on-hand. Removal of unwanted fruiting plants, or pruning them to manageable/nettable height, is also a good strategy.

Table 1. Number of days where sunset temp >= 15˚C

Date	Mildura	Swan Hill	Kerang
Jul-20	1	0	0
Aug-20	3	4	2
Sep-20	15	13	12
Up to 14-Oct-20	9	9	9

This information was compiled by Andrew Jessup of Janren Consulting for the October 2020 Greater Sunraysia Pest Free Area grower newsletter.