High pressure Qfly season

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 to enable the strategic management of the pest.

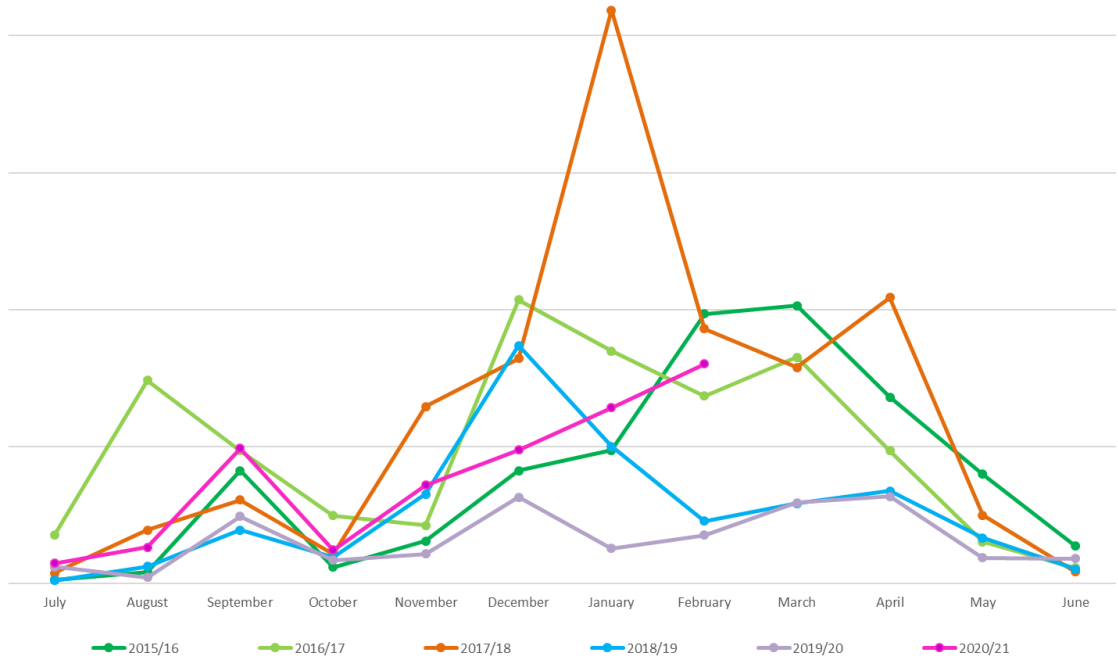
Within the GSPFA, there are 953 traps in Victoria and 197 in NSW. They are serviced by the Victorian Department of Jobs, Precincts and Regions (DJPR). Traps are placed out in urban, peri-urban and rural sites, and trapped flies are collected, identified and recorded every fortnight. There are 297 traps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

Trends in fly numbers

Queensland fruit fly trapping rates over the GSPFA bottomed out during July 2020 with 80 per cent of traps reporting no Qfly. During August 2020 the numbers began to creep up, followed by a significant increase during September, which is the start of the spring peak in the GSPFA. The number of Qfly trapped in September 2020 was the highest since 2016.

As expected, numbers went down in October in response to flies that survived winter having died out before the eggs they laid emerged. This is a normal pattern experienced each year. During November, eggs, larvae and pupae produced by surviving flies start to emerge as adult flies.

Figure 1: Queensland Fruit Fly Detections within the Greater Sunraysia Pest Free Area 2015/16 to 2020/21



Weather plays an important part in the variety of fruits available for fruit flies to infest in spring and how many fruit flies survive winter. Warm, moist winter weather encourages the survival, growth and spread of Qfly.

Qfly populations began to expand rapidly as the weather was warm but not hot (especially at night) and relatively moist, with more than normal monthly rainfalls occurring in August, October and January – fairly typical of the La Niña weather pattern which commenced in south eastern Australia in March 2020. These rains coincided with times when both Qfly populations and the number of ripening host fruits were expanding. Benign La Niña weather patterns encouraged a Qfly population expansion through December 2020 and January 2021.

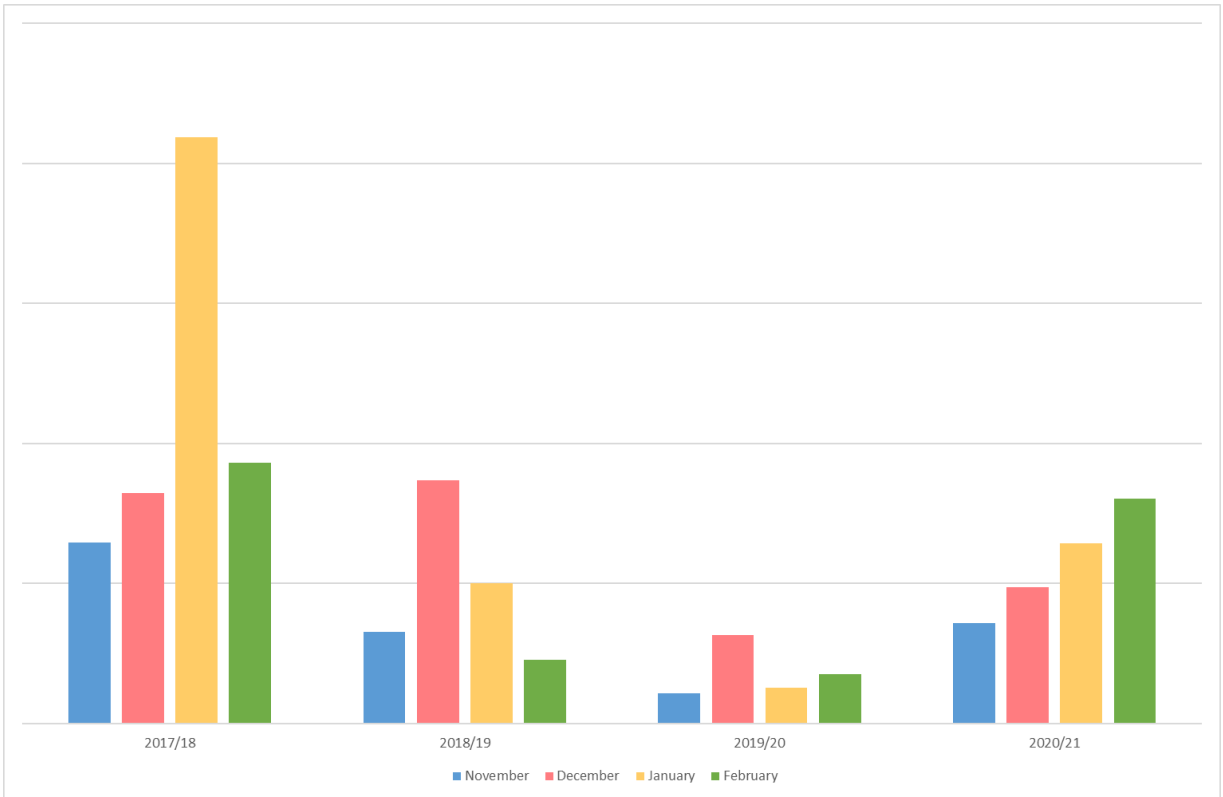
Current fly behaviour

High temperatures and low rainfalls usually occur in the GSPFA during December and January. This places pressure on the survival of Qfly and numbers found in traps typically decline during January and February. This year (2021), the weather was much more favourable to Qfly survival due to the current La Niña weather pattern. The numbers are building up heading into March, not declining as would be preferred. These conditions may cause further increases in Qfly numbers in March.

Conditions during March are such that Qfly can mate and breed easily. Qfly has had plenty of time to mate, find ripening fruit and lay eggs. Flies emerging from infested fruit in March and April will be the ones that seek refuge in winter and be the propagule for the next generation in spring.

"The flies breeding up in March and April will be the ones that seek refuge in winter and start off next year's season in spring."

Figure 2. Comparison of total numbers of male Qfly trapped in 1150 GSPFA traps during November to February each year from 2017/18 to 2020/21



"Be on the lookout for any early ripening or late hanging fruit. These are the fruits the new Qfly generation for 2020/21 will use to increase their population. If this fruit, or their plants, are removed early, flies will have fewer fruits to infest and populations will be more easily controlled."

Seasonal advice

With fruit fly building up, you should have traps out now and ensure you have supplies of baits or pesticides should fruit fly numbers increase. For information on bait spraying options, visit www.pestfreearea.com.au/growers.

Don't forget to check for Qfly in your house garden as flies 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.

If you live within about 1km of towns that have high populations of Qfly, 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 in storage are within their use-by dates and still approved for use in your state and fruit type.

Weather outlook – March to May 2021

Weather patterns forecast for the three months from March to May 2021, provided by the Bureau of Meteorology, show a 60–70 per cent chance of rainfall being higher than the normal amount of rain received in this period (25mm to 100mm). Maximum temperatures have a low (30–40 per cent) chance of reaching higher than normal maximum temperatures (21°C to 27°C). Minimum temperatures have a moderate chance (55% to 75%) of being higher than average minimum temperatures (6°C to 12°C).

These weather patterns are favourable to mass Qfly survival, principally due to increased expected rainfall and higher than average minimum temperatures.

Home and orchard irrigation creates pockets of higher-than-average relative humidity and better fruit set and growth. Qfly will prosper in these pockets and could cause great damage to crops if not controlled.

This information was compiled by Andrew Jessup of Janren Consulting for the March 2021 Greater Sunraysia Pest Free Area grower newsletter.

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