

## FRUIT FLIES IN THE GMV – OUTLOOK FOR MARCH 2019

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### Fruit fly situation – February 2019

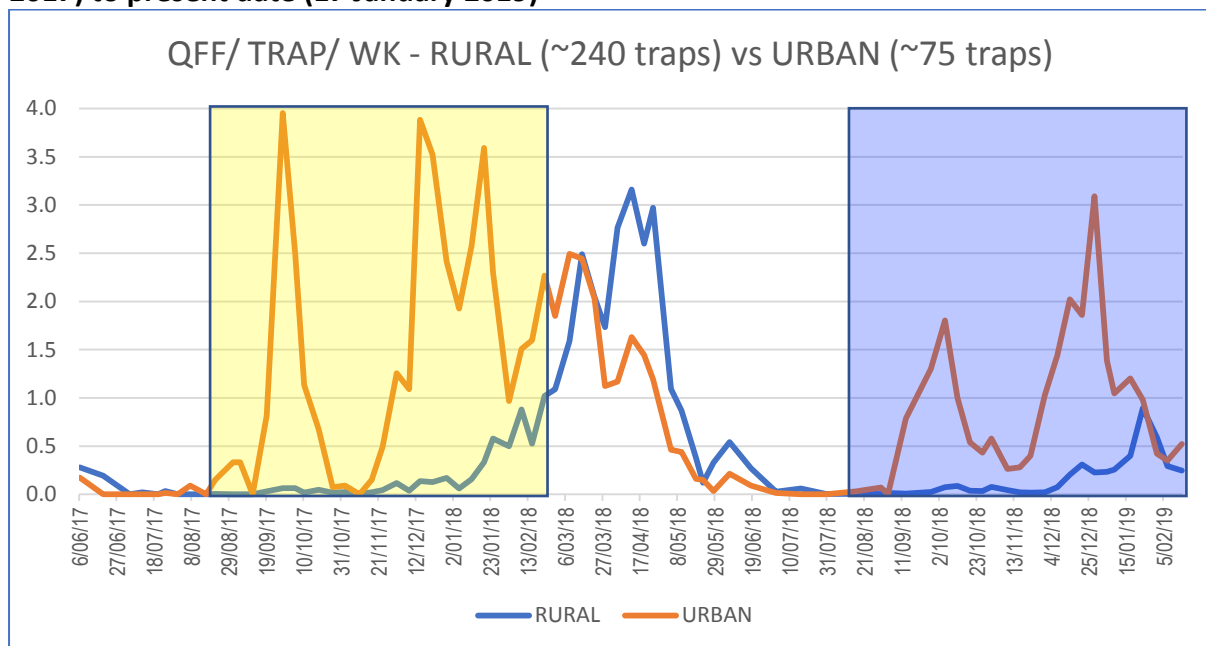
During the first two weeks of February 2019, a total of 209 flies were trapped in the 350-odd traps deployed in the GMV giving an average of 0.29 flies per trap per week (FTW). There were 129 flies (0.27 FTW) found in rural trap sites (about 240 sites) and only 75 flies (0.44 FTW) in urban sites (about 85 sites). The higher trap capture rates recorded in urban areas, compared with rural areas, are typical for this time of the year. Urban FTW peak, usually, in late September and then again over an extended period from mid-December to late January. Rural FTW, on the other hand, tend to peak only over the period from mid-March to early May.

Compared with figures from December 2018 and January 2019 recorded trappings of Queensland Fruit Fly (QFF) from February 2019 are lower for both urban and rural sites although urban trapping rates are still higher than rural rates.

Figure 1 shows the trends for urban and rural QFF trap captures as flies per trap per week (or fortnight) during the entire GMV project duration to date (15 February 2019). The difference between trap capture rates between rural and urban trapping sites is evident throughout most of the project.

The other noticeable trend is the decrease in trapped QFF for the summer of 2019 (pale blue box in Fig.1) compared with the summer of 2018 (pale yellow box).

**Figure 1. Data from the GMV Fruit Fly Project trapping grid from commencement (May 2017) to present date (17 January 2019)**



## Queensland Fruit Fly hot spots for January 2019

If your commercial orchard is close to any of the following urban areas which are, at present, registering high QFF populations, you should be ready to commence QFF control programs (if you haven't already done so). The areas of Ardmona, Cobram and Shepparton are particularly problematic this month.

If QFF populations follow the same patterns as 2017 and 2018, QFF start to become a problem in rural areas from mid to late-January. However, this year, it seems QFF populations are decreasing instead of increasing. This could be because it is too hot for QFF to be attracted to traps. Adult flies could well be in cool, moist refuges ready to attack when the weather conditions become more amenable to egg laying.

It is highly recommended that you ensure traps are fresh (following label instructions) and placed in suitable locations to intercept QFF coming into your orchard. It is also highly recommended to commence, if not already done, a bait-application program. This is especially important if you or your neighbours experienced fruit fly problems last season.

Table 1 shows all locations within the GMV where there were significant increases in the numbers of QFF trapped. These sites should be regarded as likely hot spots.

**Table 1. QFF flare ups occurring within the trapped area of the GMV from 01 to 15 February 2019**

Trap region	Rural or Urban	JAN '19 F2	FEB '19 F1
ARDMONA	R	10	21
ARDMONA	R	12	10
ARDMONA	R	6	1
COBRAM RURAL	R	0	8
COBRAM URBAN	R	129	16
COBRAM URBAN	R	82	10
COBRAM URBAN	U	5	0
COBRAM URBAN	U	0	8
EUROA URBAN	U	7	0
EUROA URBAN	U	17	4
EUROA URBAN	U	8	2
EUROA URBAN	U	15	2
GRAHAMVALE	R	5	0
KYABRAM RURAL	R	32	2
KYABRAM URBAN	U	9	1
KYABRAM URBAN	R	8	2
MERRIGUM	R	9	4
MOOROOPNA URBAN	R	5	0
NAGAMBIE URBAN	U	18	1
NUMURKAH URBAN	U	5	0
SHEPPARTON RURAL	R	0	5
SHEPPARTON URBAN	U	4	6
SHEPPARTON URBAN	U	17	4
SHEPPARTON URBAN	U	5	2
SHEPPARTON URBAN	U	5	5
TATURA URBAN	R	5	3
TATURA URBAN	U	6	0
TATURA URBAN	U	5	0
VIOLET TOWN	U	5	1
YARRAWONGA URBAN	U	5	0

### KEY

NO. OF TRAPS WITH 5-9 FLIES/TRAP/FORNIGHT
NO. OF TRAPS WITH 10-19 FLIES/TRAP/FORNIGHT
NO. OF TRAPS WITH 20-39 FLIES/TRAP/FORNIGHT
NO. OF TRAPS WITH >= 40 FLIES/TRAP/FORNIGHT

### Weather outlook

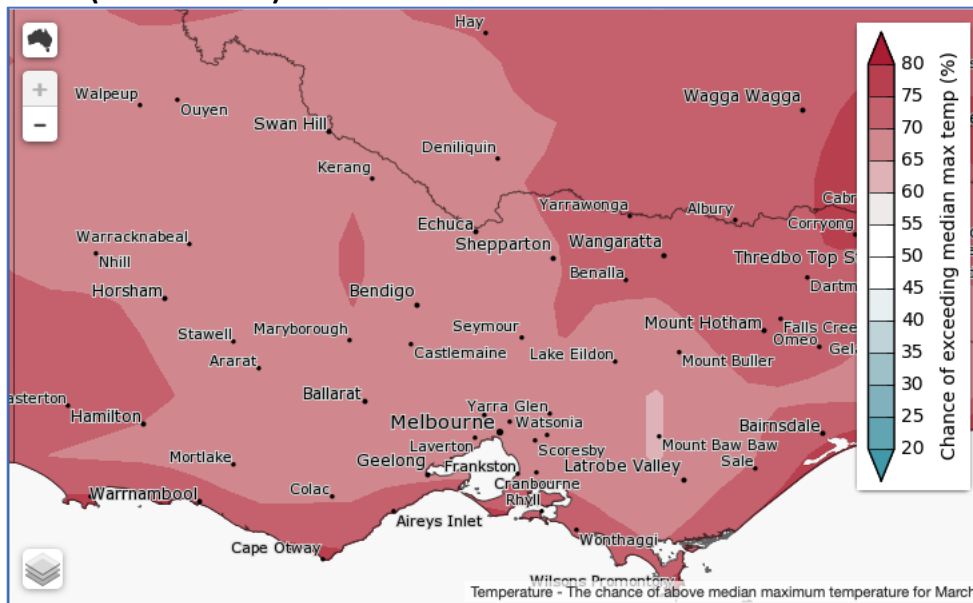
Data from the Bureau of Meteorology forecast that chances of rainfall for March 2019 being above the average of 10-25mm are even (a 50% chance for the GMV). QFF would find these levels of rain to be very limiting but with irrigation and urban garden watering they should survive, in areas serviced this way, without difficulty. If QFF-infested fruit-on-tree or fallen fruit is exposed to the full sun during these weather events many will die due to a mixture of desiccation and heat damage. If infested fruit are in the shade eggs and larvae are more likely to survive this weather.

Maximum temperatures, for the same period, are likely (60-65% chance) to be higher than the average of 24-27°C. Minimum temperatures are, also, likely (60-65% chance) to be higher than the average of 12-15°C.

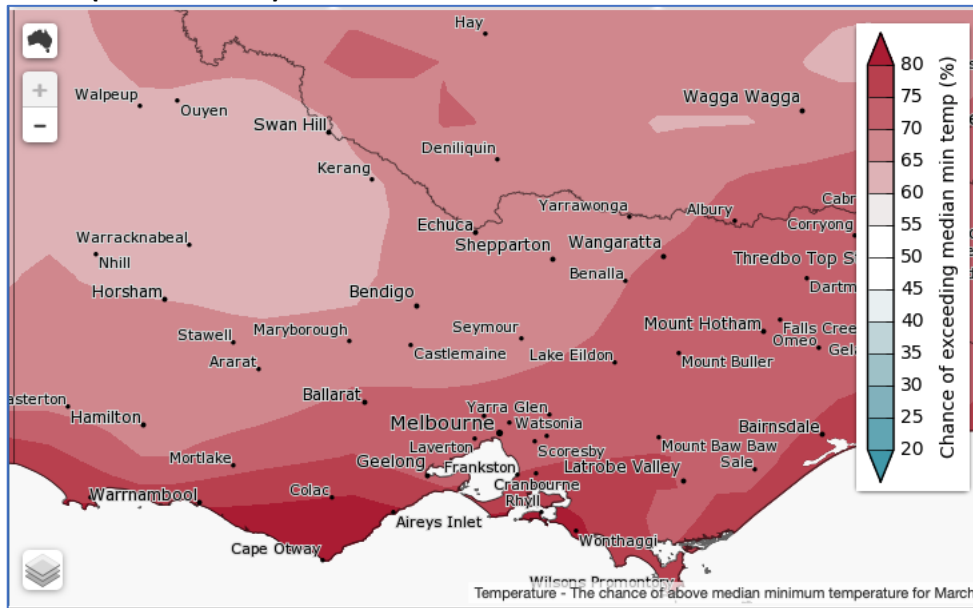
Temperatures that are warmer than normal will favour QFF population build up, but this will probably be reversed due to the likely lack of rainfall. However, this adverse impact on QFF due to lower rainfall is unlikely to occur in home gardens in urban areas. This is due to the use of home gardening watering systems which artificially raise localised relative humidity and improves the survival of QFF eggs, larvae, pupae and adults at that site.

Figures 3 to 5 show data extracted from the Bureau of Meteorology outlooks for March 2019 outlooks for the chance that maximum temperatures, minimum temperatures and rainfall, respectively, will exceed average March weather conditions.

**Figure 3. Likelihood that March 2019 maximum temperatures will exceed average March levels (1990 to 2012).**



**Figure 4. Likelihood that March 2019 minimum temperatures will exceed average March levels (1990 to 2012).**



**Figure 5. Likelihood that March 2019 rainfall will exceed average March levels (1990 to 2012).**



**Bad weather, good management – or both?**

The numbers of QFF trapped during February 2019 are significantly lower than those from both recent data (December 2018/ January 2019) and for the same periods in 2017/2018. It is likely that weather, during the 2018 winter and 2018/2019 summer has had adverse impacts on the numbers of QFF being captured in traps.

Figure 6 shows that the number of days QFF were under stress during the summer was much higher in 2018/2019 than in the previous two seasons. The amount of rain that fell at this time was also much less, in 2018/2019 than during the previous summer season.

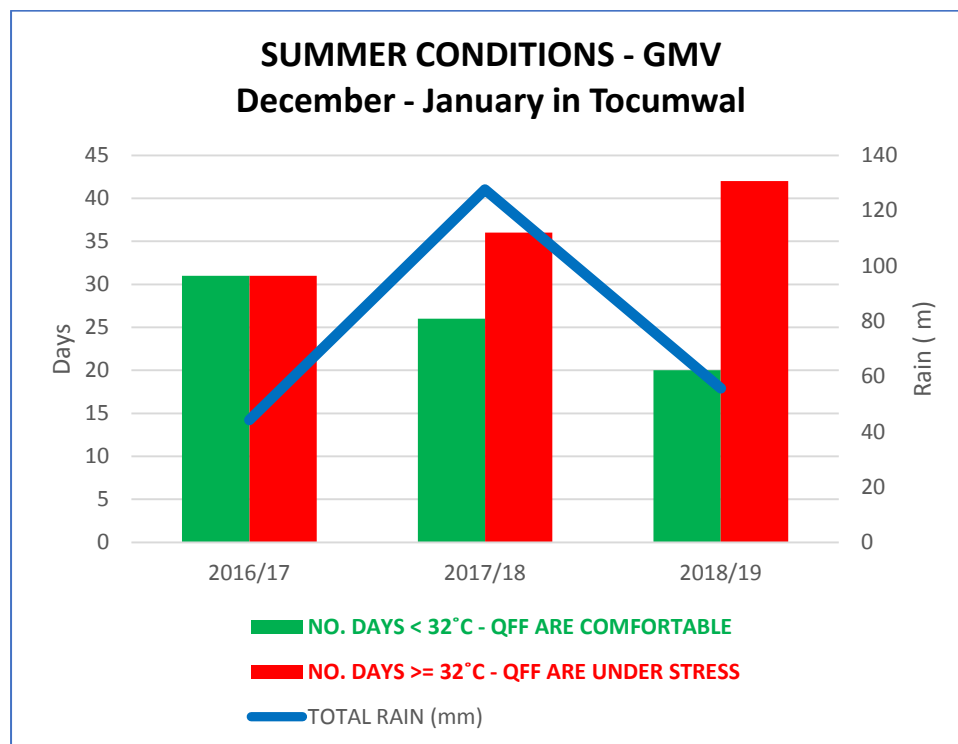
Figure 7 shows that winter conditions prior to the above summer conditions were also difficult for QFF survival.

QFF were under stress in the winters of both 2017 and 2018 but were more so during the summer of 2018/2019.

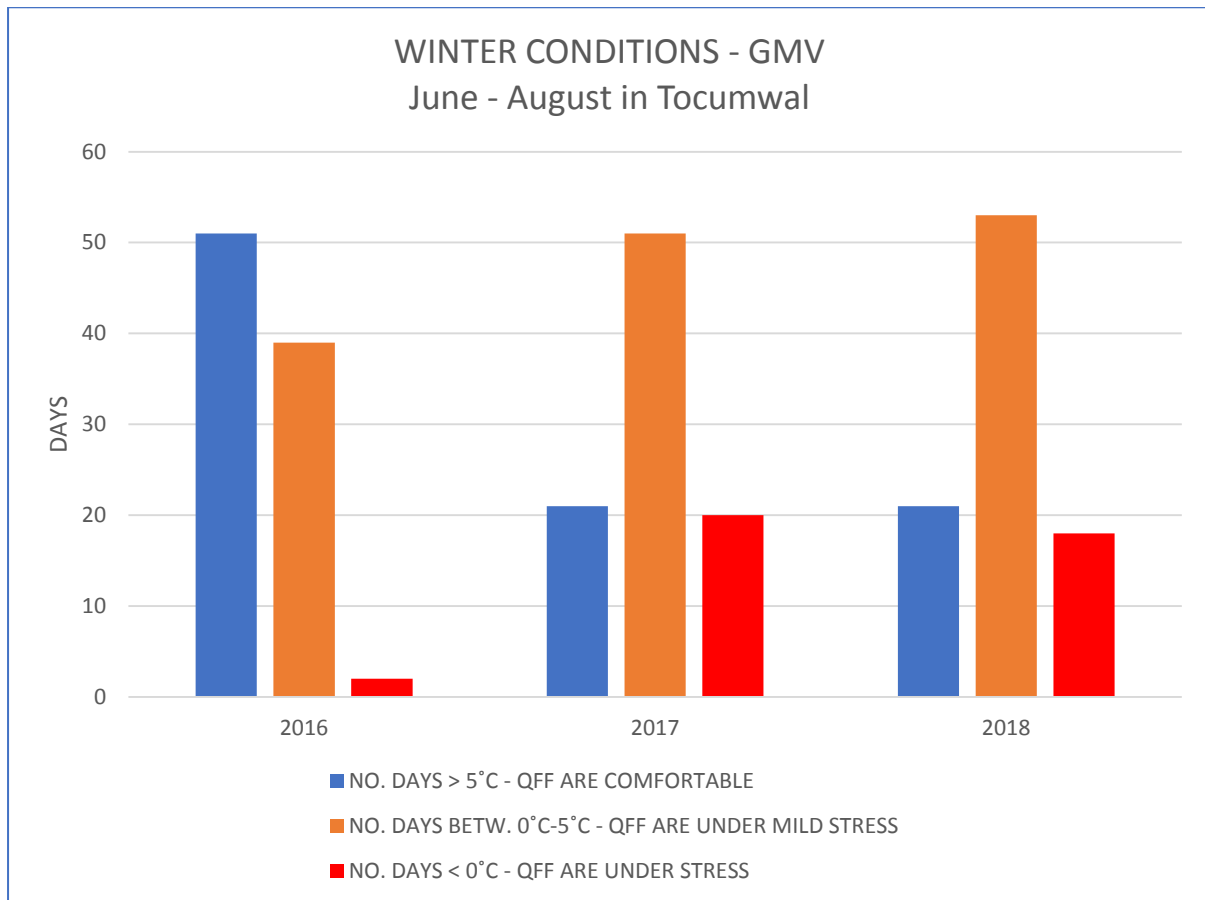
There appears to be a significant impact of weather on QFF numbers trapped in the summer of 2018/2019 and the data for the weather as well as for trap capture rates support this hypothesis. However, there has been a lot of work carried out by the community, through the Queensland Fruit Fly Co-ordinator and the QFF management program. A very large number of QFF host plants have been removed. Many people are now more aware of QFF and the problems it causes as a result of program-devised and facilitated media, workshops and community engagement. These activities commenced in mid-2017. It is likely that these activities are also impacting adversely on QFF numbers in the region.

More data is needed, over the coming year, to be able to separate the effects of weather and the effects of community engagement on QFF populations.

**Figure 6. Summer weather conditions in the GMV (based on Tocumwal readings collected for the Bureau of Meteorology) and their likely effect on QFF.**



**Figure 7. Winter weather conditions in the GMV (based on Tocomwal readings collected for the Bureau of Meteorology) and their likely effect on QFF.**



**Unmanaged orchards**

Funding is available through the GMV Regional Fruit Fly Program to assist in the removal of fruit trees from unmanaged orchards – strict conditions apply.

The process for removing the unmanaged orchard is as follows:

- Orchardists will volunteer their properties for tree removal;
- The property will be assessed by a technical expert and evidence collected that demonstrates a declared pest was present at a level indicative of an unmanaged property and could pose a risk to neighbouring commercial properties. This pest could include but is not limited to fruit fly. The absence of a declared pest disqualifies the orchard/vineyard from tree removal under this program;
- Growers will provide evidence that the orchard business is unviable, which would be defined as without production from the orchard blocks for two consecutive fruit seasons;
- Growers will be required to provide written consent to the tree removal, confirm their property is prepared for contractors and ensure all infrastructure such as wires and trellis will be removed prior to the entry of contractors;

- Agriculture Victoria will assess each application for orchard removal. The application will include the signature of the person requesting removal and data around how many hectares etc;
- Agriculture Victoria will review and provide final sign off prior to orchard removal.

Orchardists who can meet all of these requirements and are interested in applying should contact the GMV Regional Fruit Fly office by phoning (03) 5871 9222 or emailing [gmvfruitfly@moira.vic.gov.au](mailto:gmvfruitfly@moira.vic.gov.au)

### **Goulburn Murray Valley Regional Fruit Fly Project**

For assistance in managing QFF, contact the GMV Fruit Fly Coordinator, Ross Abberfield by phoning (03) 5871 9222 or emailing [gmvfruitfly@moira.vic.gov.au](mailto:gmvfruitfly@moira.vic.gov.au)

**This report was produced by Andrew Jessup, Janren Consulting Pty Ltd in conjunction with the Project Coordinator and analysis of regional trapping data supplied by the GMV Fruit Fly Project.**