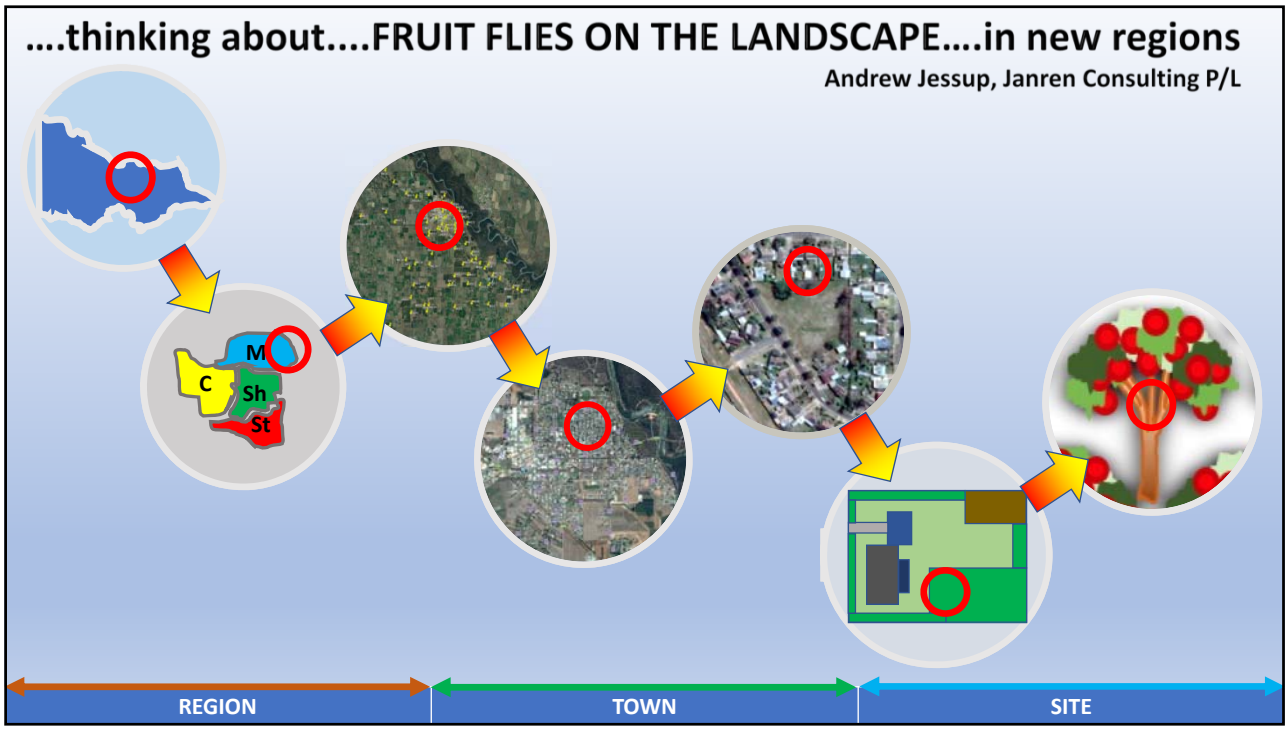
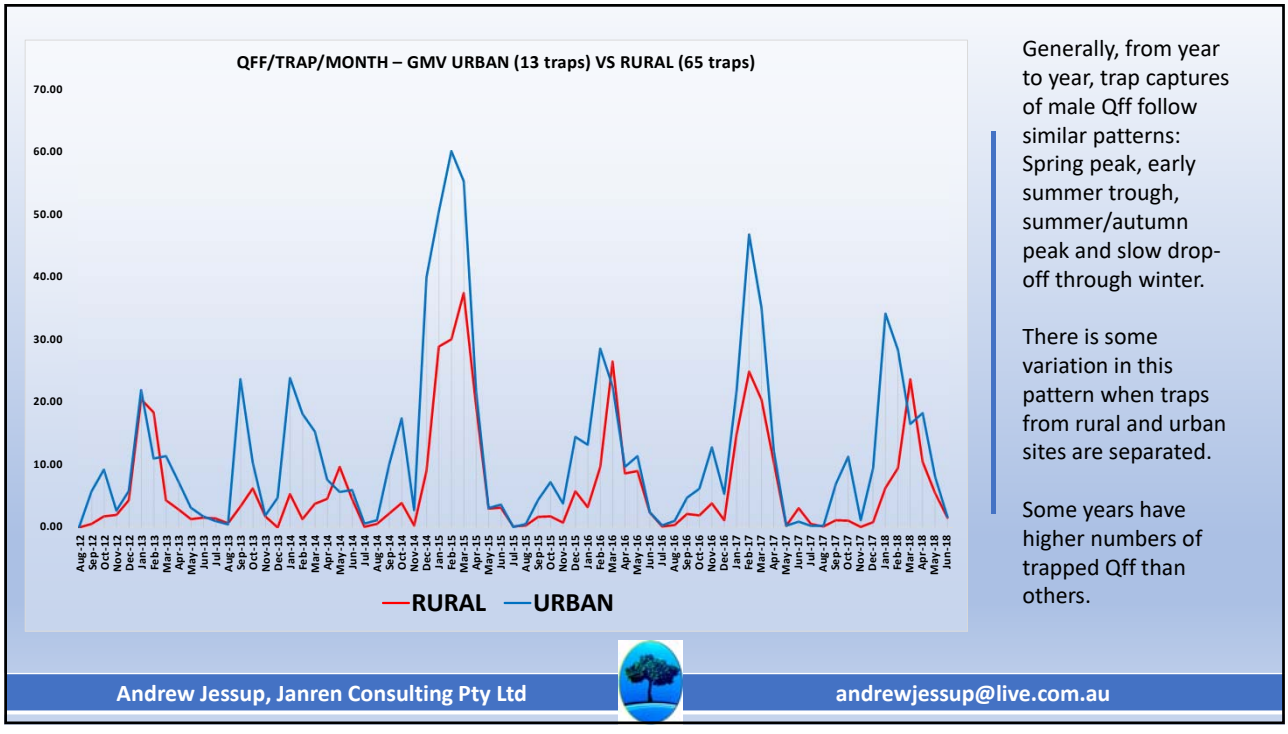

....thinking about....FRUIT FLIES ON THE LANDSCAPE....in new regions
Andrew Jessup, Janren Consulting P/L
M
C
Sh
St
REGION
TOWN
SITE


QFF/TRAP/MONTH – GMV URBAN (13 traps) VS RURAL (65 traps)
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
RURAL
URBAN
Generally, from year to year, trap captures of male Qff follow similar patterns: Spring peak, early summer trough, summer/autumn peak and slow drop-off through winter.
There is some variation in this pattern when traps from rural and urban sites are separated.
Some years have higher numbers of trapped Qff than others.
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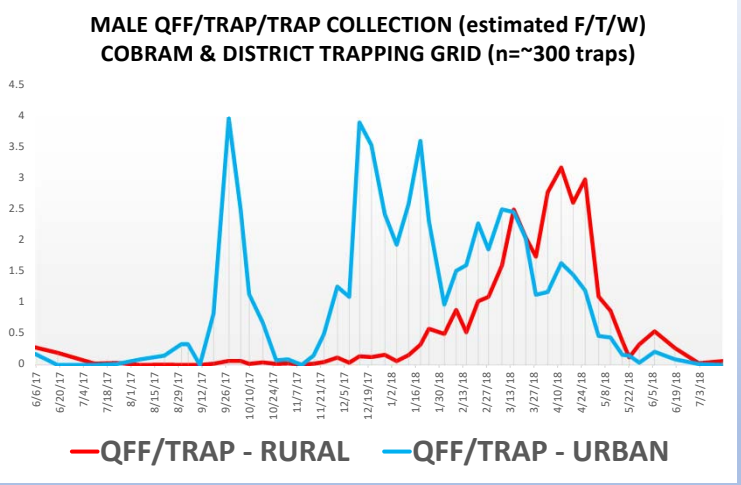

When scaled down to a single township and surrounding area, such as Cobram & District, the same pattern and the same division between urban and rural sites occur.

Is there migration of Qff from urban sites (as production wanes, weather heats up, etc) to rural sites (as high host volumes ripen) after summer?

Do flies migrate back to urban areas (where warm spots abound) from rural areas (as fruit trees become deciduous) as winter approaches?

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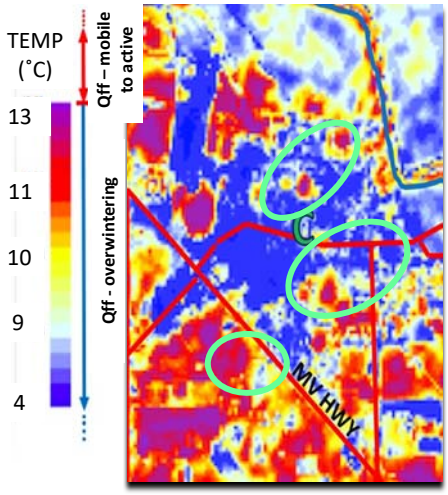
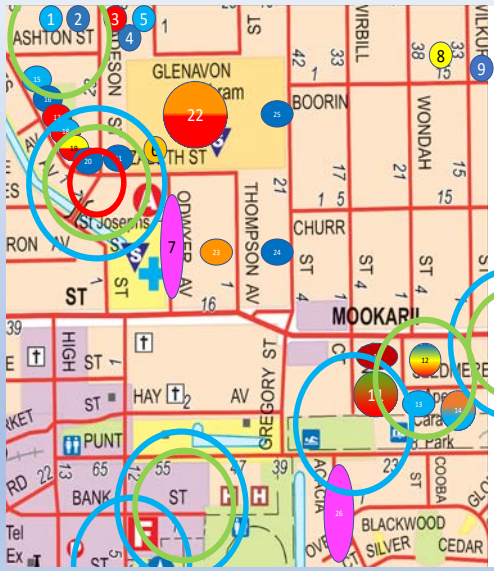


Fruit fly trapping hotspots (right) in urban Cobram can be overlaid on thermal images from Landsat (~10:30am 27 May, 2016). Looks like some hotspots correlate with warm sites on the landscape.

There are more warm sites than trapping hotspots. Maybe Qff are not trapped there because there are no traps deployed there or there are no fruit fly hosts there.

Urban Qff host plant sites (coloured patches) and significant outbreak spots (coloured circles – red: September; green: October; blue: November).

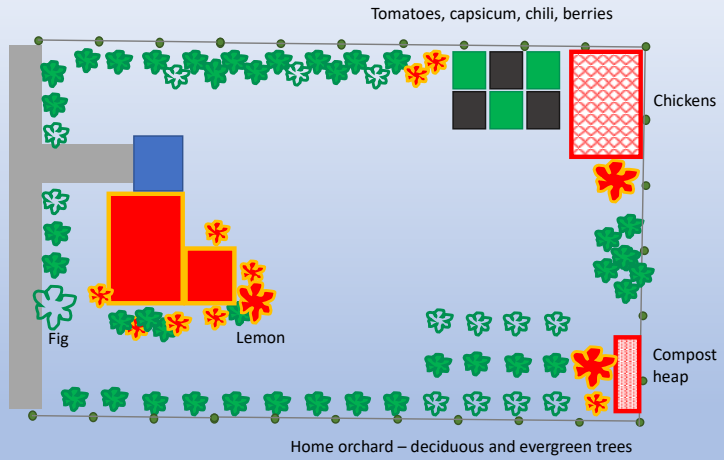


7. COBRAM

1. Apples and other fruit
2. Citrus
3. Peaches and plums
4. Citrus
5. Citrus (late)
6. Apricot
7. Prunus street trees
8. Fig
9. Lemon
10. Peach
11. Peaches, apples, lemon, lime, orange, finger lime, cumquat
12. Persimmons, figs, olives
13. Oranges (late)
14. Loquats, olives, citrus (late)
15. Citrus (late)
16. Olives
17. Plum
18. Citrus (late), peach
19. Figs, plum
20. Citrus
21. Citrus
22. Pioneer Park surrounded by house gardens with many plums, peaches, apricots, citrus, mulberry, kiwifruit
23. Loquat
24. Citrus
25. Citrus
26. Prunus street trees

It looks like Qff trapping hotspots correlate with the presence of Qff host plants. A large number of mixed fruit fly host plants, that ripen over a long period, are present at some sites. These correlate with some, but not all, hotspots.

Maybe hotspots occur due to both comfortable refuges and presence of host plants – depending on the weather and the season.



Qff can occur in a home garden in the summer in fruiting trees, berries and vegetables.

In the winter, Qff adults may persist in evergreen plants (not necessarily in plants with fruit) near warm locations: near a heated house, near the fowl yard or the compost heap. Lemon tress are a prime suspect for overwintering of adult Qff.

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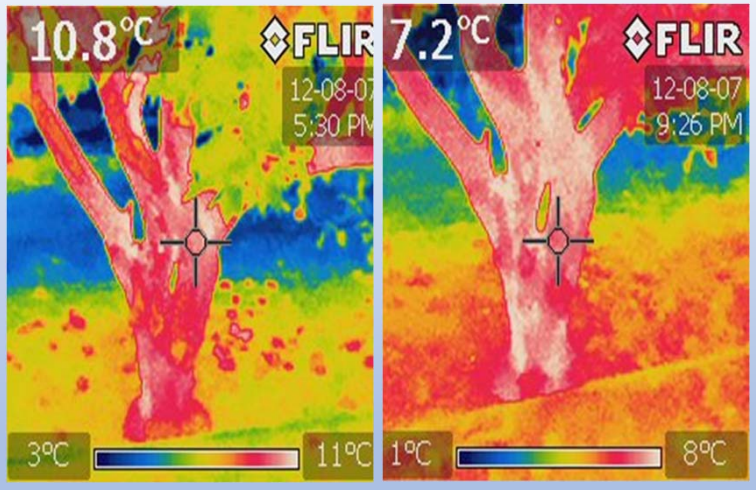

Not only can a lemon tree offer refuge from predators, wind, rain and cold temperatures during the day in cold weather (when Qff are less mobile) they absorb heat during the day and slowly release it at night so that even late at night temperatures inside parts of the tree are several degrees warmer than ambient outside conditions.

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Think about.....

- How far can Qff move in its lifetime?
- How long can Qff really live and be problematic?
- What % of a Qff population is, or can be, trapped in traps?
- Can Qff populations persist in a location on a single short-season host?
- Why is there so much contradictory advice?
- Where are Qff located, and at what life stage, at all times during the year? Can we implement strategic Qff management based on this?
- Has Qff changed over the last 120 years? or is it climate change? or is it a lack of effective management? or is it a lack of knowledge?

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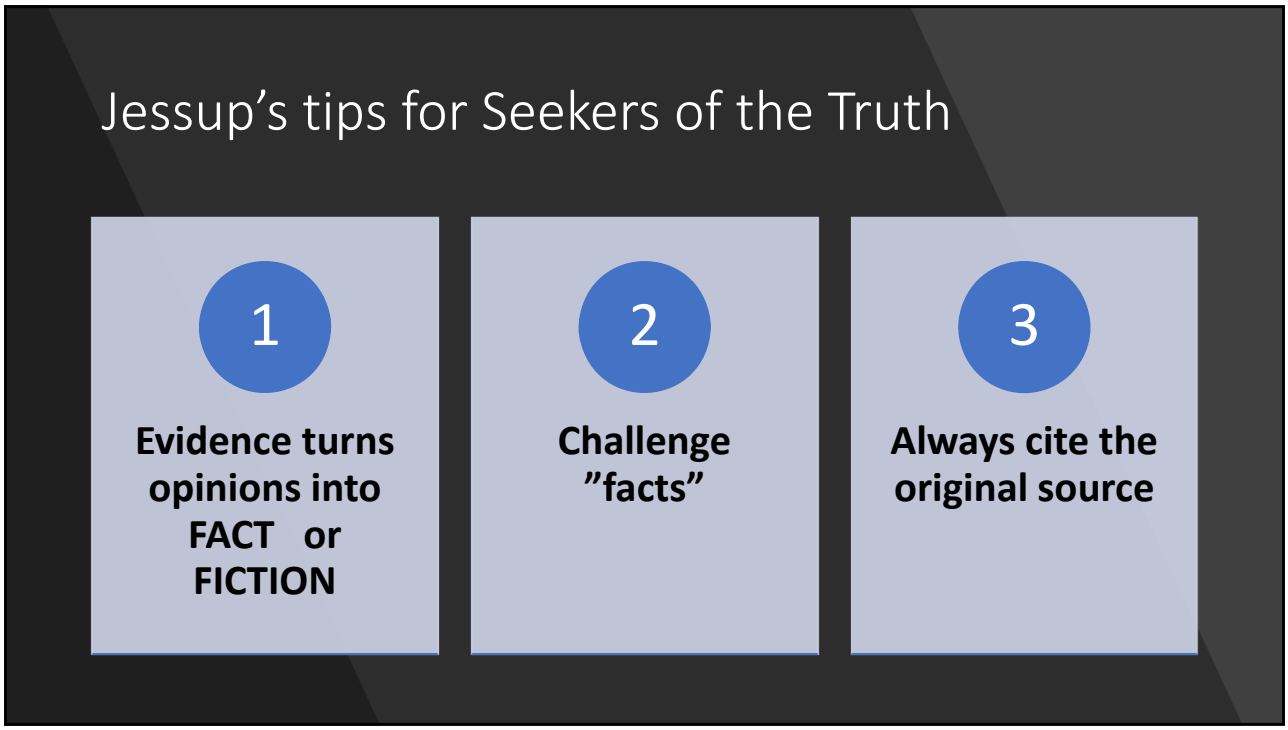
Jessup's tips for Seekers of the Truth
1
Evidence turns opinions into FACT or FICTION
2
Challenge "facts"
3
Always cite the original source