



**Victoria**  
**FGVL 2018 CONFERENCE**  
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# Topic

UNDERSTANDING AND MANAGING

QUEENSLAND FRUIT FLY

# Queensland Fruit Fly

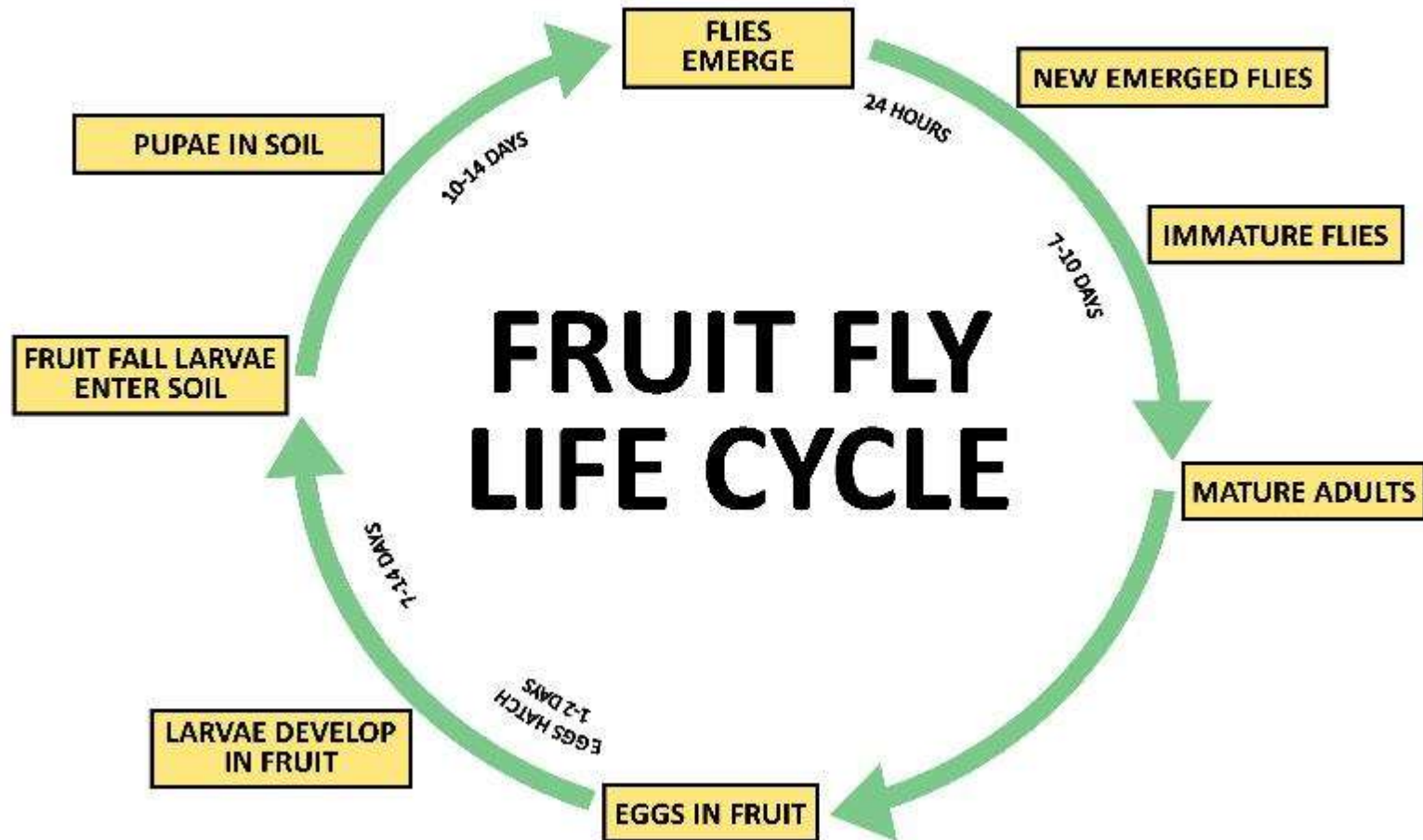
- Aggressive pest
- Highly mobile
- Small numbers cause damage

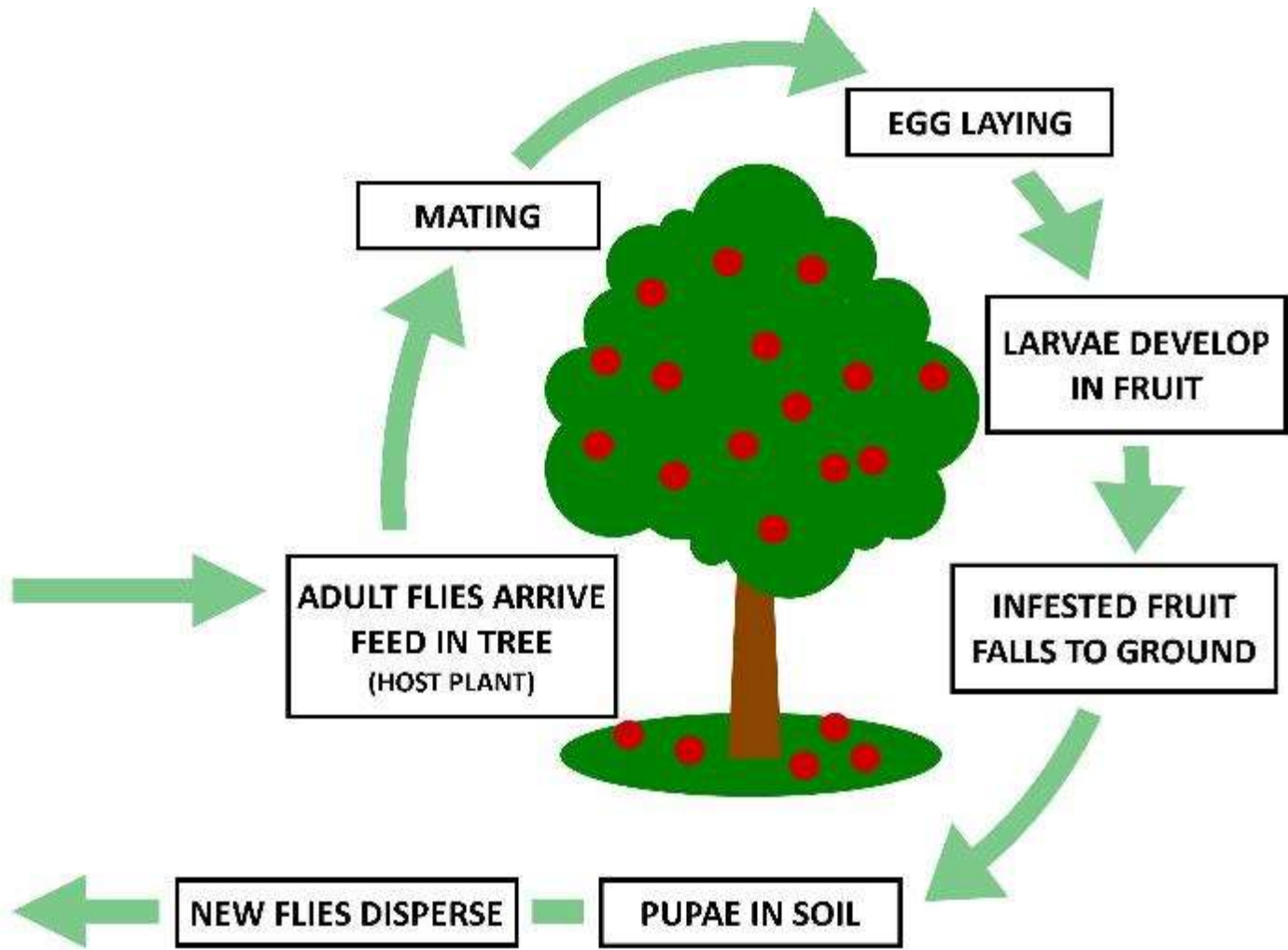
# Queensland Fruit Fly

- 1853 - First discovered in Toowoomba
- Spread south with European settlement

## Queensland Fruit Fly

- 1850s – South-East Queensland, N.E. NSW (not in Sydney area)
- 1950s – Widespread in Sydney area
- 1990s to present – moved into northern Victoria





## **Important Strategies of QFF**

- Adult Dispersal (flight)
- Adult feeding behaviour
- Oviposition behaviour (egg-laying)



## **Adult Dispersal**

- Hawaii / Japan – 200 km
- QFF in Australia – 20 to 94 km
- Immature fruit flies
- Mature flies with eggs  
(CSIRO)

## **Adult Feeding Behaviour**

- Leaf/fruit surfaces in host tree
- All required nutrients are available
- Protein very important especially to females

## Oviposition Behaviour

- Mature green to ripe fruit
- 6-10 eggs in one spot
- One female produces up to 1,000 eggs (CSIRO)

## **Female Fruit flies Entering Orchard**

- 80% immature – need protein diet
- 20% mature – not attracted to protein

## **On-Farm Control**

- Protein Bait Sprays –  
immature females
- Fruition lure and trap –  
mature females

# Protein Bait Spray Research



## Protein Technologies

- Placing protein spots on foliage outperforms protein in traps
- Yeast-based protein baits
- Xanthan Gum water –  
threefold mortality

# Fruition Trap

- Round shape
- Cobalt blue colour
- Synthetic lure



## Commercial Success Qld

Persimmon orchard - 540 trellised  
trees ca. 1 ha

2016 Econaturalure  
50% crop loss

2017 40 Fruition traps  
Weekly gel Natflav Protein Bait  
Negligible crop loss

## Commercial Success Qld

- Persimmon Plantation - 15 ha –  
wet zone
- 2017 Protein bait plus male lures  
50% crop loss
- 2018 Natflav protein plus  
Fruition traps  
Negligible crop loss

## Commercial Successes

- South-East Queensland
- N.E. New South Wales
- Feijoa, Custard Apple,  
Mango, Passionfruit,  
Carambola







# THE FRUIT FLY MANAGEMENT GUIDE

Understanding  
and managing  
fruit flies

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