Fruit Fly Management
A systems approach

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BUGS FOR BUGS

Fruit Fly - the enemy

- Fruit fly is a very serious threat
- Potential for significant crop loss
- Best tackled with a ‘systems approach’
- Good results are possible
- Need to understand the biology and behaviour of the pest

BUGS FOR BUGS

Biology & Behaviour

Eggs

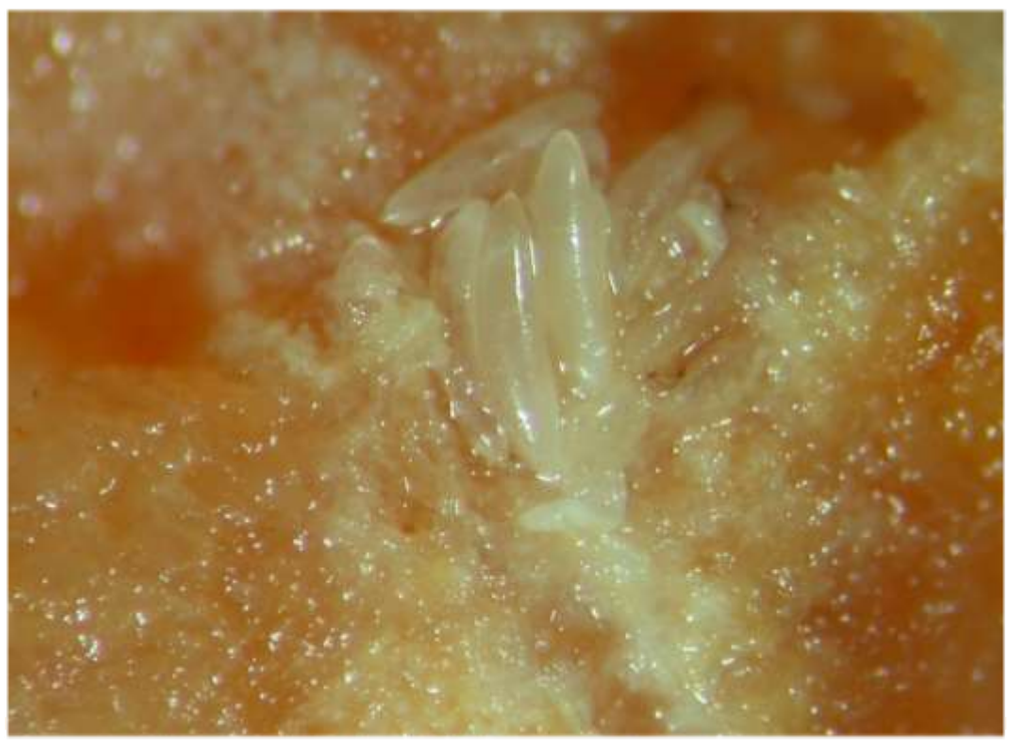
- often associated with a ‘gummy exudate’
- egg laying introduces organisms that produce a characteristic rot

BUGS FOR BUGS

Biology & Behaviour

Eggs

- are deposited into healthy maturing fruit
- hatch within a few days



BUGS FOR BUGS

Biology & Behaviour

Larvae

- feed on the rotting flesh
- soon cause the fruit to drop
- leave the fruit to pupate in the soil

BUGS FOR BUGS

Biology & Behaviour

Adult flies

- are long lived
- can travel some distance
- the female requires a protein feed before her eggs will mature
- male flies also actively seek protein
- the sexes behave differently

BUGS FOR BUGS

The tools available

Protein bait sprays

Monitoring

Male annihilation

Sanitation

Post harvest

Crop management

Physical control

Cover sprays (insecticides)

Biological control

SIT

BUGS FOR BUGS

A ‘Systems approach’

Protein bait sprays

Monitoring

Male annihilation

Sanitation

Post harvest

Crop management

Physical control

Cover sprays (insecticides)

Biological control

SIT

BUGS FOR BUGS

Protein bait sprays

This is the essence of fruit fly management

- Adult flies emerge from the soil after pupation
- Females need to mate and feed on protein before they can lay eggs
- We have a 5-7 day window before they can damage fruit
- Protein can be acquired from fungi or bacteria - or from our applied bait sprays

BUGS FOR BUGS

Protein bait sprays

- Quick and efficient
- 50 Ha in three hours

BUGS FOR BUGS

Protein bait sprays

Tips for best results

- start early

  (before fruit susceptible)
- apply regularly
- don’t ‘miss’ a treatment
- place on foliage or trunk

  (never on ground or grass)
- re-treat after rain
- apply fresh
- consider windbreaks or similar for low growing crops such as strawberries

BUGS FOR BUGS

Male fly traps

Monitoring

- many available
- male sex a
  toxicant

BUGS FOR BUGS

Monitoring

Monitoring should also include:

- regular field assessment
- (possibly twice weekly in critical periods)

Look for:

- adult flies visible
- evidence of ‘stinging’

BUGS FOR BUGS

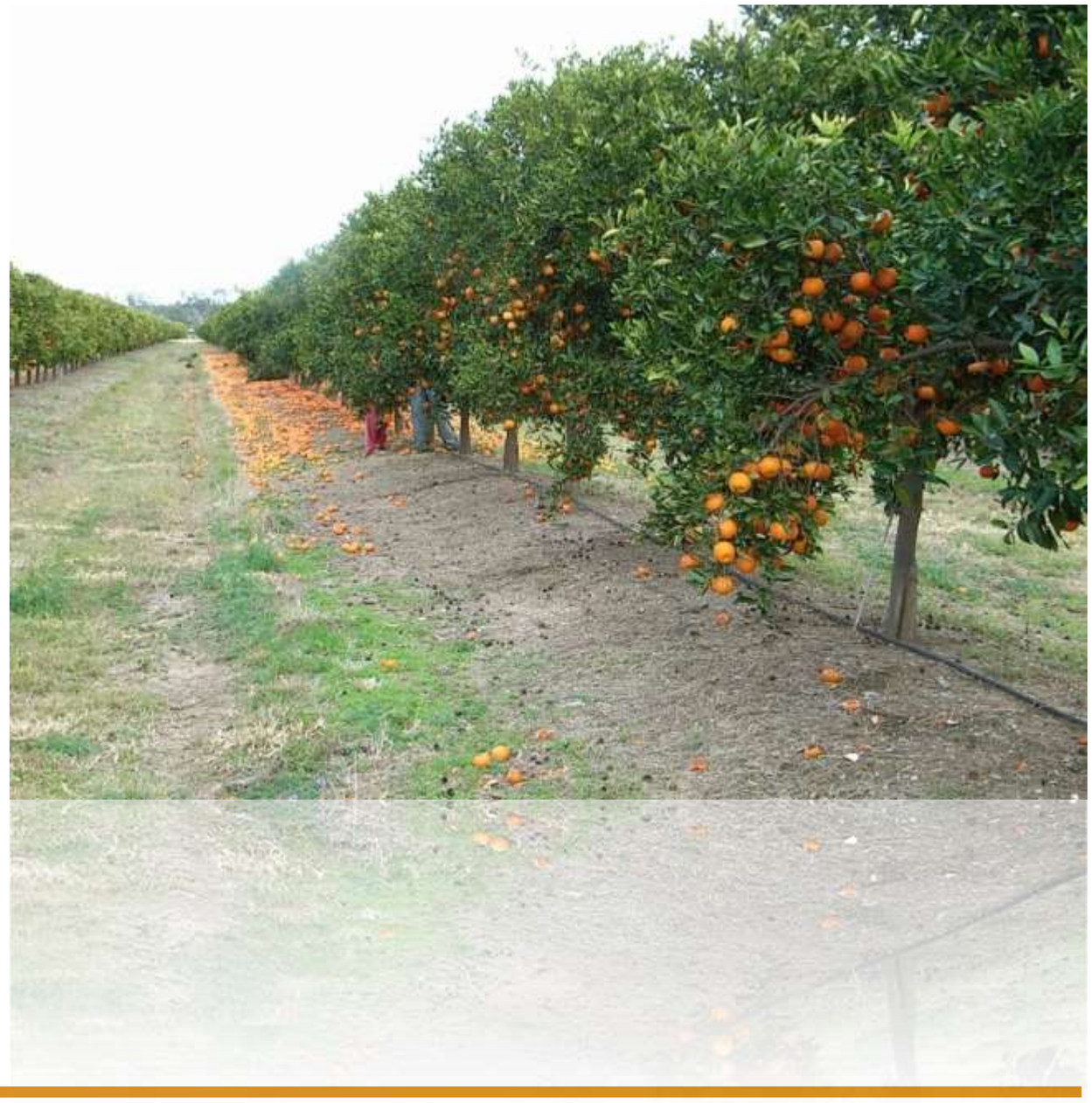
Male Annihilation Technology = MAT

- An extension of male trap concept
- Suppression of the male fly population
- An invaluable tool in an AWM program

BUGS FOR BUGS

Sanitation

- Remove all fruit after harvest
- Harvest early if possible
- Inspect fallen fruit
  - If stung review procedures
  - If not stung then little risk



BUGS FOR BUGS

Systems Approach

Several components to achieve best practice fruit fly management

- monitoring
- protein bait sprays
- male annihilation (MAT)
- sanitation

BUGS FOR BUGS

Area Wide Management

FRUITFLY
FORCE

BUGS
FOR
BUGS

What is AWM ?

- Regular monitoring
- Male annihilation
- Protein bait sprays

= orchard wide management

This is done routinely and efficiently by all growers in the Central Burnett

Plus

- Town treatments

= area wide management

BUGS FOR BUGS

Town Treatments

BUGS FOR BUGS

Area Wide Management

Local crop consultant:
Mal Wallis

‘Fruit fly is hardly an issue any more.
Even Auburnvale Citrus - where the murcott crop was allowed to hang extremely late – suffered no fruit fly injury.
This is in strong contrast to the situation only a few years ago.’

CBAWM meeting report Nov 2014

Area Wide Management

Local crop consultant:
Brian Gallagher

‘I hardly ever see any fruit fly adults or evidence of damage these days.
I am very happy with the results from the Area Wide Management Program.’

CBAWM meeting report Nov 2014

Area Wide Management

Gayndah citrus grower:

Nick Ulcoq

‘My fruit fly control is extremely good with only very occasional hot spots occurring. These are invariably managed with a more rigorous protein bait application program (possibly two times weekly for a couple of months each year - typically Feb/Mar).’

CBAWM meeting report Nov 2014

Area Wide Management

Mundubbera citrus grower:
Mark Trott

‘The fruit fly control at Luscdale and Tallaringa orchards is outstanding. We bait once per week most of the year and have not had to use cover sprays for almost 20 years’.

CBAWM meeting report Nov 2014

Area Wide Management

- Central Burnett Area Wide Management has been in place now for around 15 years.
- Each year there has been a steady improvement (although hard to quantify).
- Over time the incremental gains have amounted to a very significant result that means fruit fly is under extremely good control throughout the district.
- It is no longer possible to conduct fruit fly research in the area as the population is too low to get measurable results.