

# FRESH NOTES

A TECHNICAL UPDATE PUBLISHED BY HORTGRO SCIENCE

## Monitoring & control of fruit fly – *Bactrocera dorsalis* (BD)

### Monitoring and control of Medfly, Natal Fly, Cape fly

- Post-harvest and winter monitoring and control (bait) of fruit fly is critical to ensure that fruit fly populations are managed down to the lowest levels.
- From 1 September 2019 the EU will be implementing new regulations which will require that all stone fruit should be free from (zero tolerance) all non-European fruit fly. This includes all fruit fly found in South Africa.
- Orchard sanitation remains an important part of fruit fly control and should be diligently implemented.

### Status of BD:

- *Bactrocera dorsalis* (Oriental Fruit Fly) is a quarantine pest of Asian origin capable of infesting various commercial fruit crops (400 recorded hosts). It was previously described as the Invader fruit fly (*Bactrocera invadens*).
- Know your status. BD is present under official control in certain regions of SA. If you are in a region where it is not present it is critical to maintain an 'absent' status. Please note that the areas where it is currently absent are vulnerable to point incursions. These areas should be extra vigilant.
- **NOTE:** A "Removal Permit" is required to move fruit from an infested districts to a non-infested area.

### Why monitor for BD:

- Keeping it out of your region is by far the most cost effective and viable option. Early detection enables the implementation of an eradication programme.
- Monitoring in regions where BD is present is a requirement for the control of BD.
- Monitoring of BD and recording of data is a requirement for any special programme (e.g. Exports of Peach & Nectarines to the European Union and from 1 September 2019 onwards it is a requirement for all stone fruit exported to the EU).
  - Previous years BD monitoring records to be submitted to DAFF as part of the orchard registration process.

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## What do I do if I get a BD in a trap:

- Notify FruitFly Africa – Contact person: Eloise du Plessis: 021 882 9541, [eloise@fruitfly.co.za](mailto:eloise@fruitfly.co.za)
- Place specimen in closed plastic vial and send it to FruitFly Africa for identification.
- If confirmed to be BD – a delimiting survey will be instituted.
  - A 5km radius of trap will be placed under quarantine.
  - A “Removal Permit” is required to move fruit from the quarantine area to a non-infested area. Fruit trading may therefore continue in compliance with established additional risk mitigation procedures.
  - If no further BD found for 12 weeks – quarantine lifted and area declared “pest free”.
- If a second BD is found in the delimited area an eradication programme will be initiated.
  - Eradication control measures (MAT Blocks, Protein Baits, sanitation) implemented for 8 weeks.
  - Monitor for further 4 weeks - If no further BD catches the quarantine lifted and area declared “Eradicated”.

## Monitoring Guidelines and Action Plan for BD:

- Monitoring guidelines and Action Plan for BD attached.

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## MONITORING GUIDELINES

for *Bactrocera dorsalis*

Abbr.

*Bactrocera dorsalis* - BD  
FruitFly Africa - FFA  
Methyl Eugenol - ME  
Production Unit Code - PUC

### WHY MONITOR

- BD is a quarantined pest
- Monitoring data is required for special program registration
- Pro-active eradication/ control

### HOW MANY TRAPS NEEDED

BD not present

- 1/PUC
- 1/100 ha

BD present

- 1/PUC
- 1/25 ha

### WHICH TRAP

- Bucket trap
- Lure: ME Dispenser
- Be cautious of cross contamination when handling ME.
- Insecticide: Dichlorvos strip
- Coat support wire with sticky ant barrier or Vaseline

TWO YELLOW STRIPES ON THORAX

CLEAR WING WITH CONTINUOUS DARK COSTAL BAND

DARK T-SHAPED MARKING ON ABDOMEN

OVIPOSITOR (FEMALE ONLY)

### NOTIFICATION

If in a BD free area:

- Notify FFA; Eloise du Plessis (eloise@fruitfly.co.za or 021 882 9541)
- Send specimen in vial to FFA

### PLACEMENT

- In the orchard
- In the host tree
- 1,5 m above ground
- Place in shade
- Clear of leaves
- Additional trap in home garden

### MONITORING

- Monitor all year
- Bi-weekly

### REPLACE ATTRACTANT

- Every 6 – 8 weeks

### RECORD KEEPING

Datasheet with the following details:

- Province and region
- Farm Name
- PUC
- Host/ cultivated crop
- Orchard number
- Date
- GPS coordinates
- Keep records

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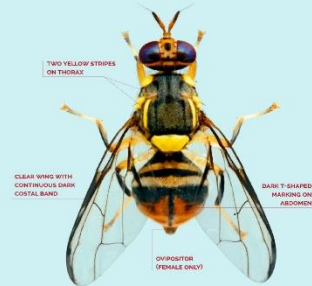
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## Abbreviations

*Bactrocera dorsalis* - BD  
FruitFly Africa - FFA  
Methyl Eugenol - ME  
Male annihilation technique (MAT)

## ACTION PLAN for *Bactrocera dorsalis*

ALSO KNOWN AS ORIENTAL FRUIT FLY



### 1. DELIMITING SURVEY

#### OBJECTIVE

- Assess if detection represents an outbreak.
- Determine size of affected area.

#### TRAP DENSITY – ZONES

- Total area 7 km x 7 km around trap
- Core area 1 km x 1 km grid around trap
- Core area: 10 ME traps + 10 Biolure
- Remaining 48 km<sup>2</sup>: 2 ME traps /km<sup>2</sup>
- ME traps every 2 km on transect roads for first 10 km, every 5 km for the next 40 km, every 10 km for the remaining kilometres within 50 km radius.
- Monitor traps weekly
- Send records and GPS of traps to NPPO (DAFF).

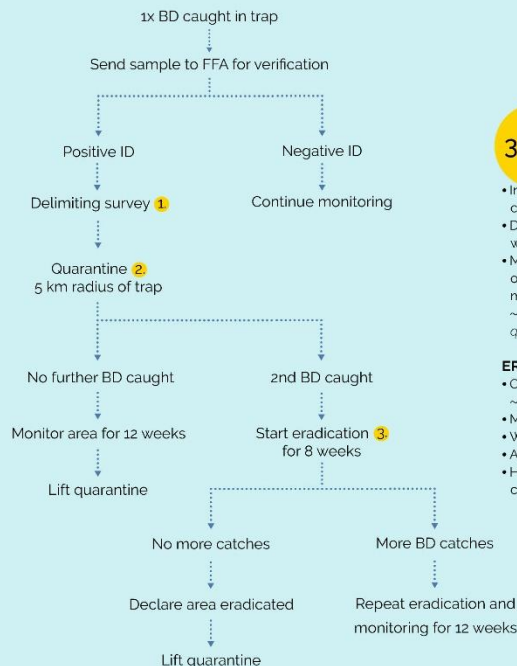
### 2. QUARANTINE

#### OBJECTIVE

- Restrict movement of host material through or out of the quarantine area to a pest free area.

#### MECHANISM

- DAFF issues an official order to growers or packhouses within 5 km radius.
- If intending to move BD host material or fruit from a quarantine to non-quarantine area one must apply for a removal permit via [removalpermit@daff.gov.za](mailto:removalpermit@daff.gov.za) or call 012 309 8735/8791/8763.
- Cover consignments of fruit moving to non-infected areas with insect-proof netting; accompanied by a DAFF-issued removal permit.
- Lift quarantine after 12 weeks if no BD catches



### 3. ERADICATION

- Initiate eradication programme following second BD catch in the delimiting survey area (±25 km<sup>2</sup>).
- Duration of eradication is two (2) BD generations—8 weeks.
- Monitoring to verify eradication should take place for one (1) generation—4 weeks—after eradication measures have stopped.
- ~ If there are zero (0) catches in this period lift the quarantine.

#### ERADICATION MEASURES

- Orchard and field sanitation  
~ Bury fruit ~50 cm within quarantine area.
- MAT block at 4/ha.
- Weekly protein baits
- Attract and kill option can be included.
- Home gardens and wild hosts are included in the control programme.

For *Bactrocera dorsalis* monitoring guidelines and the comprehensive action plan visit the Hortgro Science website.

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