

## MEANS OF MOVEMENT AND DISPERSAL

There is a real threat that the pest can be introduced into the Lesser Antilles. This will happen if travellers carry affected fruits from the Greater Antilles and do not declare them to Plant Quarantine Officials at the airport.

## ECONOMIC IMPACT

Fruit Flies are a major threat to Caribbean Agriculture. Their larvae damage fruit making it unfit for human consumption and trade, negatively impact farm incomes and national economies. Total export losses for the region are estimated US \$25 million. Production losses for Brazil could be as high as around US\$ 60 million annually, while for the smaller countries in the region this could be around US \$ 500,000.

## WHAT CAN WE DO?

- Do NOT bring into your country any fruit or agricultural produce without the required Plant Quarantine Import Permits/Approval
- When you travel declare all agricultural items.
- Report any infested (pierced or larvae present) fruit to your Ministry or Department of Agriculture
- If fruit flies are present do not sell or transport infested fruit
- Follow all control recommendations from your Ministry or Department of Agriculture

## PEST THREATS TO THE REGION CARIBBEAN FRUIT FLY



*Anastrepha suspensa (Loew)*

### PROTECT

Safeguard our agriculture & environment do NOT bring in undeclared fruit.

### DETECT

Monitor for Signs & Symptoms of the Caribbean Fruit Fly

### REACT

Report any suspect fruit to your Ministry or Department of Agriculture and follow ALL recommendations for Control or Eradication

## CARIBBEAN FRUIT FLY

*Anastrepha suspensa* (Loew)



Of the fifteen (15) pest species of *Anastrepha* present in the neotropics, the Caribbean Fruit fly (Caribfly) poses the most imminent threat of invading the islands of the Caribbean region because of its limited distribution, the potential damage it can do to crops that form the core of our production and exports and its potential unregulated movement in trade.

## LIFE CYCLE

*Anastrepha suspensa* infests only mature to overripe fruits. As in many *Anastrepha* species the eggs are laid below the skin of the host fruit. The life cycle includes the egg, three larval stages, pupa and adult. Eggs are laid individually and hatch in about two to three days; the larval feeding period occupies 10 to 14 days, and pupation about the same. Pupation is in the soil under the host plant. The adults can be found throughout the year. Development times are prolonged in cool weather.

## SYMPTOMS AND INFESTATION

The adult female Caribbean Fruit fly lays eggs in several fruits for which the Caribbean is well known and which we export regionally and extra regionally. Fruits affected include Mango (*Mangifera indica*); many Annonas (*Annona spp.*), Spondias spp., Papaya (*Carica papaya*), Avocado, (*Persea americana*) West Indian Cherry (*Malpighia punicifolia (glabra)*), Guava (*Psidium guajava*), many Citrus species, Coffee, Tomato and Sapote. Fruits in which eggs are laid decompose from the actions of the larvae developing from eggs in the fruit and from secondary infection. Without timely treatment affected fruits cannot be eaten or traded.

Attacked fruit can show signs of oviposition punctures, but these, or any other symptoms of damage, are often difficult to detect in the early stages of infestation. Much damage may occur inside the fruit before external symptoms are seen, often as networks of tunnels accompanied by rotting.



## CONTROL

- Control can be considerably aided by good cultural practices, for example by gathering all fallen and infected host fruits, and destroying them.
- Insecticidal protection is possible. Malathion is the usual choice of insecticide for fruit fly; GF-120 (with spinosad) is an environmental friendly alternative
- Possibilities for biological control of *Anastrepha suspensa* - the parasitoid wasp - *Biosteres longicaudatus* is being considered.

## DISTRIBUTION

The Caribbean fruit fly is at present limited to the islands of the Lesser Antilles, including the Bahamas, the Cayman Islands and their northern neighbor the state of Florida in the US. The pest is not present in the Lesser Antilles.

