

## The Fruit Fly Curse – it can be controlled

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**Mediterranean fruit-fly** is one of the most serious and devastating horticultural pests worldwide, and costs tens of millions of dollars per year in W.A. alone. It is important that everyone with fruit trees does their utmost to control this pest. Nothing is worse than nurturing fruit trees over months, only to have the crop destroyed at the end by fruit-fly attack.

Nearly of the fruits that we grow is susceptible to Medfly attack, including some that are commonly believed to be resistant. Even lemons are occasionally stung, particularly the newly ripening winter crop during a warm autumn, and ripe avocados if allowed to hang on the tree into the spring. A number of native and exotic ornamentals, such as Lily Pilly and Jelly Palm, are also responsible for perpetuating this cursed pest.

Of the fruits we grow, some are a lot more susceptible than others. The worst are the soft fruits that have a strong smell or a thin skin (guavas, persimmons and white-flesh nectarines are classic examples).

While fruit fly activity slows down during winter, even stopping completely in colder areas, the relatively warmer climate in coastal areas does allow continued breeding. Lack of good control during this period effectively gives Medfly a breeding 'bridge' into the main summer crops. Loquats seem to come and go quickly, but they are a curse for being such a bridge.

A total myth needing dispelling is that fly lay their eggs in the flowers – totally wrong! They are attracted by the smell of fruit, so it can be as little as two weeks from ripening for early stonefruit up to three months for late-season fruits such as persimmons and apples.

### MEDFLY CONTROL

Growing fruit is a commitment that should not be taken lightly, and Medfly control is a major part of this commitment. A control program can be divided into three areas: cover spraying, baiting and trapping, and orchard hygiene.

#### **1. Cover spraying:**

Unfortunately, there are no compounds, natural or synthetic, currently registered for cover spraying non-commercial (home garden) fruit trees, though a couple (such as Spinosad) are in the pipeline.

#### **2. Bagging & Netting:**

Most of us have become understandably concerned about directly spraying the food we eat, even with the so-called 'soft' or 'natural' options. Total exclusion is becoming more and more popular – you may lose a bit of colour & flavour from the shading effect, but that's better than poisoning ourselves.

For some fruits, such as mangoes, guavas and persimmons, it may well be practical to cover individual fruits or clumps of fruits with insect proof covers. A cheap way is to buy jewellery bags over the internet – they don't last that long but are cheap. A number of products are on the market. For some examples, go to:

[http://www.greenharvest.com.au/pestcontrol/exclusion\\_prod.html](http://www.greenharvest.com.au/pestcontrol/exclusion_prod.html)

<http://www.diggers.com.au/main.htm>

For small fruits such as apricots, bagging individual fruits would be impractical. You may even consider totally covering the trees with an insect proof netting such as 'Mite Net' or 'fruit-fly exclusion netting'.

Total 'tree bags' premade from exclusion netting are now becoming available – you drape them over the tree and tie it off around the trunk. Tass 1 Nursery ([www.tass1trees.com.au](http://www.tass1trees.com.au)) is one outlet selling them. These should last a minimum of ten years, a very cheap total control per tree per year. You can make your own from mosquito netting (but only last two to four seasons).

#### **3. Hygiene:**

Picking up fallen fruit and treating and disposing of it properly is a critical part of Medfly control.

Running poultry under the trees is great because they pick up the fly pupae, thus further breaking up the life cycle.

Keeping trees pruned and manageable makes for bigger and better fruit that is also easier to spray. Thinning fruit out so no two are touching each other yields the same benefits. This thinning is done when the fruitlets are between the size of a pea or a bean.

If you have very big trees, covering may be too hard or impractical to do, so you could consider restructuring your trees, even into a trellis/espalier, to make this easier.

See over/

#### 4. Baiting and trapping:

Did you know that if everyone with fruit trees baited and trapped all year round we simply wouldn't have the huge problem we have now?

The idea of baiting and trapping is to kill the flies before they can get to the fruit. Medfly has very poor vision but a highly refined sense of smell. They can travel up to a kilometre and a half before the smell of fruit gives them their target.

So if we can fool them by putting out a sweet smelling decoy and kill them at that point, there are less flies around to sting fruit. A female Medfly lives for as long as three months and can lay up to 1000 eggs, so it is obvious that if we can kill them first we'll have a lot less damaged.

Baiting and trapping are different procedures but should be done in conjunction with each other.

Baiting is preparing a sticky solution that is splashed onto the leaves and will stay there, not run off. A chemical **must** be added to ensure the fly is killed. If a female feeds on high protein she will lay more viable eggs, making the problem worse. However, don't add too much chemical as the smell may turn the fly away. 5mls of Sinosad (eg, Yates Success®) per litre of bait is sufficient.

Trapping is using a bottle containing a lure to trap the flies. Plastic soft drink containers are great, and the 1.25L size is ideal, though any size can be used. Traps are mainly effective for monitoring fly activity, but do catch and kill a lot of flies if done properly.

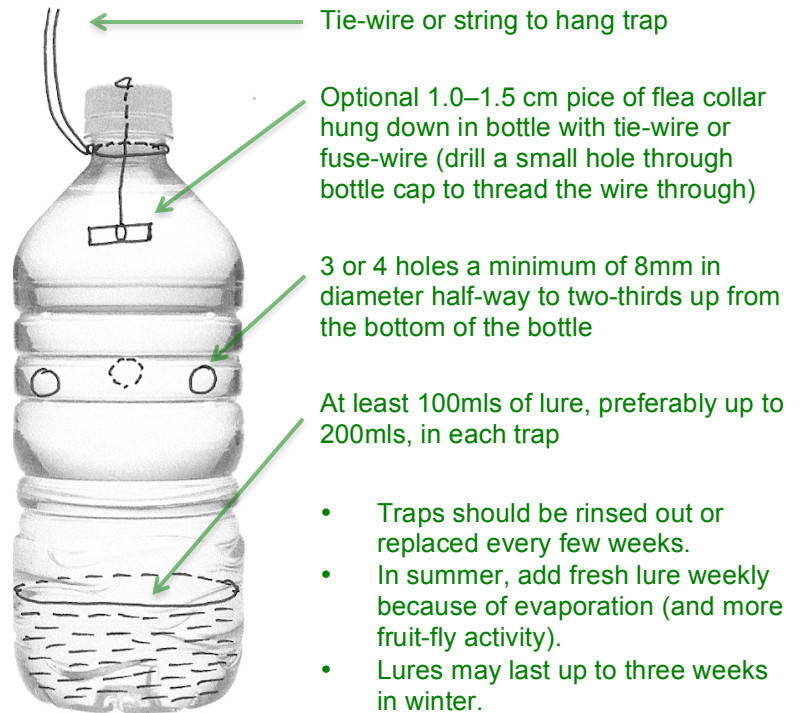
The idea of a trap is that the fly enter and feed on the lure, then fly vertically towards the light. They soon run out of energy and fall back into the liquid and drown, but a chemical can be added to make sure of their demise. If you don't want to use chemicals in your trap, hang a piece of flea collar in the top. The fly will land on it and be killed.

You can use the same lures for the traps as you use for baiting. A good method is to mix a really sticky splash bait for foliage baiting, then dilute what is left to top up your traps.

#### Plastic Bottle Fruit-fly Trap:

Here is a simple trap design you can make. Any plastic bottle from 600ml to 1L are suitable (1.25L bottles are ideal).

**NB: Please be sure sure to fully remove any labels first – they may deter the flies or attract young children.**



#### TRAP (LURE) SOLUTIONS:

Fruit-fly are attracted to a number of lures which have a strong sweet smell as the female fly is searching for a high protein diet. All the different mixtures below are added to 1Litre of water (they are minimum rates and you can make them stronger) - see which one you prefer:

- 100gms white sugar + 2gms brewers yeast
- 10mls vanilla essence + 20mls household ammonia
- 5mls vanilla + 20mls ammonia + 50gms sugar
- Ground peel from 6 mandarins or 2 oranges + 5ml ammonia
- 1tsp sugar + 1tsp borax + 2tsp bran
- Other lures include molasses, fruit syrups, vinegar, vegemite, sweet fortified wines, beer and fruit juices can be used neat (don't add water), though you can add a little vanilla essence to give it more smell. My favorite is apple & guava juice.

Place at least two traps per tree, but for every trap in fruit trees have at least two in non-fruiting plants to decoy the flies.

More information can be found on my website ([www.peterecoppin.com](http://www.peterecoppin.com)). To receive my E-letters containing seasonal hints and topical discussions, and also to be notified of workshops and other events, email me and simply type your preferred name and 'mail list' in the subject line.