

Augmentoria: a natural fruit fly control device

THE PROBLEM

Fruit flies are highly damaging to fruits and fleshy vegetables. Female flies lay their eggs directly into fruit, where the maggots feed. Fruit fly control without pesticides is difficult.



A SOLUTION

AUGMENTORIA are a simple idea which combine two sustainable fruit fly controls: crop hygiene and the use of natural enemies.

HOW THEY WORK

Picking up and destroying fallen fruit (= crop hygiene) can break the fruit fly cycle by destroying the new generation of flies. However, this also destroys the main natural enemies of the fly: small wasps which lives inside the fruit fly maggot. *Augmentoria* can be any container with a mesh lid, where the mesh size is just right to keep the new generation flies from escaping, but which lets the new generation (and smaller) wasps out.



RECOMMENDATION

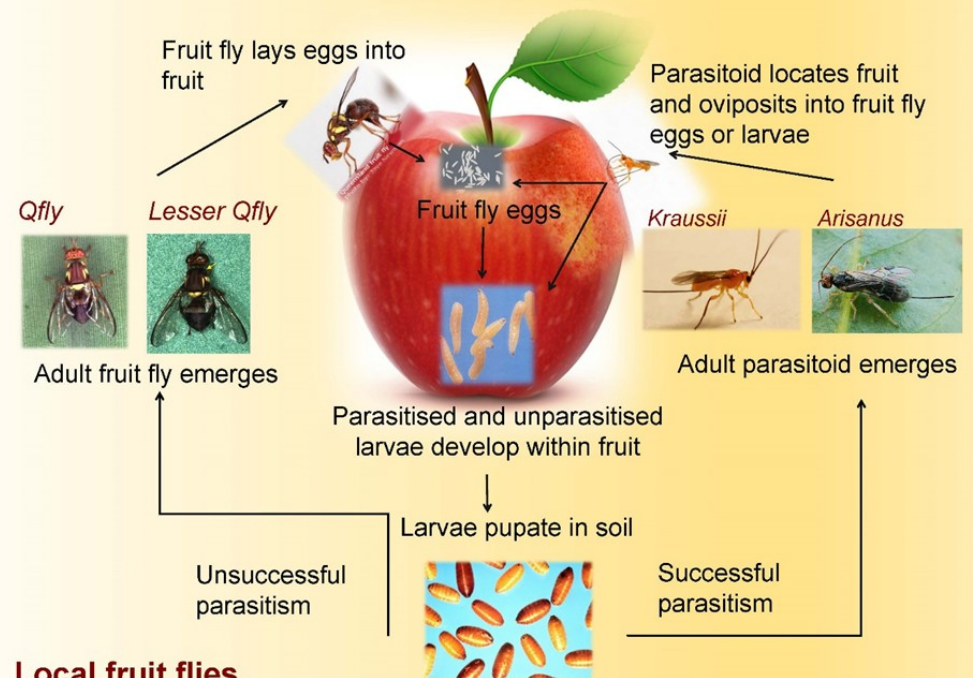
- Pick up fruit daily
- Place them in a container covered with 50% shade cloth
- Do this for no more than a week, and then don't remove the cover until all fruit flies have died
- Repeat process with two to three containers as needed

ACKNOWLEDGEMENTS

This work is being undertaken by the Queensland University of Technology Fruit Fly Research Group as part of the collaborative project 'A national biocontrol program to manage pest fruit flies in Australia', led by Agriculture Victoria. The project is funded through the *Strengthening Australia's Fruit Fly System Research Program*. Funding for the program is provided by the Australian Government, with contributions matched from state and territory governments.



Fruit flies & their parasites



Local fruit flies

Queensland Fruit Fly (Qfly) and Lesser Queensland Fruit Fly (Lesser Qfly)

- ✦ Scientific names: *Bactrocera tryoni* and *Bactrocera neohumeralis*
- ✦ Average size: 5-8mm
- ✦ Attack: Most fleshy fruits and vegetables, particularly as they ripen
- ✦ Time of year: Spring through summer, declining through autumn

Local beneficial wasps

Kraussii (the orange one) and Arisanus (the smaller black one)

- ✦ Scientific names: *Diachasmimorpha kraussii* and *Fopius arisanus*
- ✦ Average size: 4-6 mm
- ✦ Time of year: Arisanus is active very early in the spring; Kraussii builds up during the season.

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