Management of fruit flies in mangoes using traps

Recognize the problem
Fruit flies damage mangoes by laying their eggs in the fruits, just under the skin. After eggs hatch, the larvae feed on the flesh of the fruit, causing it to turn mushy and eventually rot. The problem of fruit flies in a mango orchard can be mitigated using fruit fly traps.

Background
A fruit fly trap is basically a small container with a lid and a few side holes near the rim. A wick treated with an aqueous solution of a chemical attractant (lure) and a recommended pesticide, is placed inside the container which is then hung on a tree in or around an orchard (Fig. 1). Fruit flies are attracted into the container by the lure, but are killed by the pesticide. Examples of fruit fly lures are methyl eugenol and terpinyl acetate which attract Bactrocera invadens and Ceratitis cosyra respectively, while examples of killing agents for both fruit fly species are malathion, fenthion and deltamethrin.

Management
• Find small plastic containers with lids and improvise them into traps by hanging cotton wicks as shown in Fig. 1
• Use a 10 - 20% aqueous solution of pesticide such as malathion, fenthion or deltamethrin
• Drench the wick of each trap with the pesticide solution, then add to it, 2 - 4 ml of a given lure (depending on target fruit fly species), then finally return the wicks into the traps – Avoid smearing or splashing the lure on the outer surface of the traps
• Set the traps in the orchard (30 – 100 traps per ha), depending on pest pressure
• Rid the traps of caught fruit flies every week
• Replace trap wicks every four weeks
• Use the traps along with other management techniques such as destruction of fallen fruits and harvesting fruits timely (at physiological maturity)

When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.

Scientific name(s) > Ceratitis cosyra, Bactrocera invadens

The recommendations in this factsheet are relevant to: Malawi

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Edited by Plantwise

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