

## Can one male lure attract all kinds of fruit flies?

No. Male lures are specific to different kinds of fruit flies. However, protein bait can catch different kinds of fruit flies.

## Recommended fruit fly management methods

- Population monitoring
- Protein bait
- Male annihilation
- Field sanitation
- Biological control (biopesticides, parasitoids and weaver ants).



Mango farmers with healthy fruit produce.



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### icipe – Working in Africa for Africa...

International Centre of Insect Physiology and Ecology (*icipe*) – was established in 1970 in direct response to the need for alternative and environmentally-friendly pest and vector management strategies. Headquartered in Nairobi, Kenya, *icipe* is mandated to conduct research and develop methods that are effective, selective, non-polluting, non-resistance inducing, and which are affordable to resource-limited rural and urban communities. *icipe*'s mandate further extends to the conservation and utilisation of the rich insect biodiversity found in Africa.

*icipe* contributes to sustainable food security in Africa through the development of integrated pest management systems for major agricultural and horticultural crops. Such strategies include biological control, and use of behaviour-modifying and arthropod-active botanicals. *icipe* puts emphasis on control approaches that have no detrimental impact on the environment. These options are always designed to fit the needs of the farmers, and are developed on-farm and with farmers' participation. In addition to fruit flies, other key areas of *icipe*'s research include pests of tomato, brassicas, beans, and staple food crops such as maize and sorghum.

African Fruit Fly Programme is an *icipe*-led fruit fly management programme for income generation, poverty alleviation, and improving food and nutritional security of growers across Africa.

### COVER PHOTO

*icipe* staff explaining the use of the fruit fly trap to a farmer.

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# Fruit fly Population Monitoring

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**Left:** Fruit fly; *Bactrocera dorsalis*.

**Right:** Fruit fly trapping in mango orchards.



**Right:** Fruit fly trap catches using methyl eugenol.



### What is fruit fly population monitoring?

Fruit fly monitoring is an action taken to understand the population dynamics of the fruit flies in the field to guide control measures. It is done using traps baited with attractants (lures).

### Why is population monitoring important?

Monitoring tells the growers on how the population of fruit flies is changing within or outside the cropping area. Results from the monitoring exercise are used to decide when to start control and determine the efficacy of the control measures. Monitoring is also important to detect invasion of new fruit flies and their distribution.

### What can I use to monitor fruit flies in the field?

Monitoring can be done using traps that are baited with protein baits (e.g Fruit Fly Mania) or male attractants (such as methyl eugenol). Another method is to collect fruits and check for infestation, but this is labour-intensive.

### What traps can I use for monitoring?

Commercial traps used for monitoring fruit fly population changes are many and include the Lynfield trap (simple 'bucket' type of trap), McPhail trap (a two-piece pear-shaped container with yellow bottom and clear top) and Jackson trap (a delta-shaped trap made from waxed cardboard material). You can also use simple home-made traps from plastic mineral water bottles or cooking fat containers.

### What bait can I use for monitoring?

Traps should be baited with protein bait such as Fruit Fly Mania or male attractants such as methyl eugenol.

#### (a) Protein bait

Female fruit flies require protein to mature their eggs and for survival, and males need protein to mature and survive. They are, therefore, attracted to protein which can be used to capture and kill them.

#### (b) Male attractant

Fruit fly specialists have identified different kinds of lures for different groups of fruit flies. Some male fruit flies feed on them to attain sexual maturity. Male lures such as methyl eugenol can attract fruit flies from long distances. Other male lures attract from short distances.

