

B-24: Control of fruit flies using methyl eugenol traps

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Fruit flies *Bactocera dorsalis* and *Bactocera zonatus* cause severe yield losses in mango, guava, avocado and other fruit crops. Sometimes damage can be 100%. Foliar application of Fenthion twice a week starting from flowering has been recommended to control the fruit files. However, farmers do not use insecticides due to difficulty in application. Use of baited traps to attract fruit flies would be an appropriate way to control fruit flies. The efficacy of methyl eugenol traps in controlling fruit flies was studied.

Plastic bottles (10 cm diameter and 20 cm length) were used to make traps. Condube tube was fixed to both sides (top and bottom) of the bottle. A hook was fixed to the wall at the centre of the bottle to facilitate hanging and a bent wire was annexed to a hook within the bottle. Two drops of methyl eugenol, formulated at CISIR, were placed in a cotton pad in the hook and the trap was replenished weekly. Number of fruit flies attracted were counted weekly. Prior to placement of traps, damage due to fruit flies had been

estimated for a year. Then traps were placed in different locations at the rate of 4 traps per ha and the number of fruit flies trapped were counted weekly. Fallen fruits and harvested fruits were inspected for fruit fly damage. Damage level in fields with traps and without traps were compared using DMRT test.

Bactocera dorsalis, *Bactocera zonatus* and *Bactocera cucurbitae* were observed in traps. Former 2 were more common and *B.zonatus* was the predominant species. Fruit fly population had 2 peaks at Girandurukotte. Damage due to fruit fly was over 50% in mango varieties 'Karatha Kolamban', 'Wellai Kolamban' and 'Villard'. It was low in 'Kohu Amba' a local variety. Before the experiment was started, fruit fly damage was about 40%. However, during seasons in 1991 and 1992, fruit fly damage was reduced to less than 5% in areas where methyl eugenol traps were used and the damage ranged from 18 to 70% in untrapped sites.

Methyl eugenol traps can be used to control fruit flies in Mango, Guava, Avocado and other fruit crops. In large orchads, 2-3 traps per ha are sufficient. In isolated locations, 5 traps/ha are needed.