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Ecofriendly management techniques against melon fruit fly, *Bactrocera (Zeugodacus) cucurbitae* (Coquillett, 1899) infesting bitter gourd, *Momordica charantia* L.

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Bitter gourd, *Momordica charantia* L. is an annual vegetable crop grown in tropical and sub-tropical areas of the globe. It is cultivated in India in a commercial scale but melon fruit fly, *Bactrocera (Zeugodacus) cucurbitae* (Coquillett, 1899) limits its cultivation, causing heavy damage to the fruits, the edible part. It is very difficult to control this pest because the fruit is harvested at frequent intervals and consumed after little cooking. This practice could lead to human health hazards arising from toxic residues in the fruit.

Studies were made to evaluate some lure in bait spraying and biophysical bases of resistance or non-preference against melon fruit fly. Molasses, sugar and alcohol were used for baiting preparation at varying dosages and *Endosulfan* 35 EC was used as toxicant. Four low volume sprays at 10-day intervals were made, starting with the initiation of flowering. Nine cultivars of bitter gourd including hybrid, open pollinated and local were selected for the study. The observation of percent fruit infestation was recorded during each harvest. The experiments were laid down in randomized block design and replicated thrice.

Baiting spray provided significant reduction in fruit infestation and percent fruit infested was ranged from 2.43 to 4.91 against 10.41% in control and 6.10% in *Endosulfan* without baiting material. Among the different baiting spray, molasses found most effective for reduction of fruit infestation. Fruit infestation in krarif season was higher as compared with rabi season. Among the cultivars evaluated 'Peyarafuli Local' recorded lowest infestation followed by 'Garbeta' local and 'Vivek' F1 recorded highest followed by 'Sasya' F1. Local cultivars showed least preference crop (1–25 % fruit damage) to the pest. Resistant crop cultivation and baiting spray have less or no hazardous effects on human health and the environment can be incorporated in integrated pest management programmes and organic farming in vegetable cultivation.

Key words: baiting spray, cultivars, vegetable IPM, organic farming

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