

## Mango Infesting Fruit Flies and Their Parasitoids in Selected Localities in Central Province of Sri Lanka

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Fruit flies are recognized worldwide as the most detrimental horticultural insect pests of fruits. In Sri Lanka, biological control through parasitoids has recently been introduced to manage fruit flies infesting vegetables but not for fruits. Therefore, this study was designed to investigate the presence of mango infesting fruit flies, their parasitoids and the level of parasitism in the natural setting. Field collection was conducted from December, 2016 to August, 2017 to collect mature, immature and ripe infested mango fruits from 28 localities in the central province. From the randomly collected 95 mangoes from fruit orchards and stalls, 36 were infested mangoes and were kept individually inside a plastic container until flies emerge. Emerged fruit flies and parasitoids were identified using standard taxonomic keys. A total of 696 adult fruit flies belong to six species were collected from Kandy (11 localities), Matale (8) and Nuwaraeliya (10). *Bactrocera dorsalis* (70.69%) showed the highest prevalence, and was followed by *B. kandiensis*, *B. invadens*, *B. syzygii*, *B. zonata* and *B. cucurbitae*. Fruit flies infested different mango varieties; “Karthakolomban” (174 fruit flies), “Wild mango” (172), “Vellaikolmban” (134) “Kohuamba” (102) “Red Willard” (81) “Rataamba” (24) and “Gira amba” (9). Independent from the mango variety, a total of 39 adult individuals of parasitoids belong to *Diachasmimorpha longicaudata* (56.4%) and *Spalangia* sp. (43.6%) was identified parasitizing *B. kandiensis* and *B. dorsalis*, respectively. No fruit flies emerged from a mango sample from which only *Spalangia* sp. (7) was recorded. Highest numbers of fruit flies (30) were recorded from mangos having the lowest parasitism rate (0.2) while no fruit flies were recorded from that of having the highest parasitism rate (1). Present study suggests the possibility of using the naturally existing parasitoids in biological control programmes through their proper conservation and management.

**Key words:** fruit fly, parasitoids, mango, *Bactrocera dorsalis*, *Diachasmimorpha longicaudata*

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