

D-48 Responses of virgin female flies to male sex pheromone in *Dacus cucurbitae* (Diptera: Tephritidae)

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In Sri Lanka a number of vegetables such as bittergourd (*Mormodica charantia*); cucumber (*Cucumis sativus*); pumpkin (*Cucurbita maxima*) (belong to the family Cucurbitaceae). These are damaged by a major pest *Dacus cucurbitae* (Coquillett) commonly known as the melon fly.

Behavioural responses of female *Dacus cucurbitae* to the pheromone of males were studied using an olfactometer. Females responding to the pheromone, showed different behavioural activities such as wing vibration, turning in circles, lateral rocking, raising of abdomen and ovipositor, attraction (movement towards males) and probing with the ovipositor. Two responses of the female (attraction and ovipositor probing) were considered in the study. Behavioural activities of the female were restricted to the dusk period under low light conditions.

The males release the sex pheromones which attract the female. The source of the sex pheromones is the male rectal gland associated with the postero-ventral region of the rectum. The release of the male pheromone is also restricted to the dusk period.

Virgin females showed high responsiveness and the male showed maximum pheromone release between 6-8 days after emergence. Behavioural responses of mated females to the male pheromone were significantly lower than those of virgin females. Previous mating did not diminish the pheromone release of the males. Responses of virgin females did not significantly differ with the mated or unmated state of males.