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## Fruit Flies (Tephritidae: Diptera): Their Species Composition, Host Range and Field Response to Food-based and Male Lures Attractants

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### Abstract

Fruit flies belong to family Tephritidae are notorious pests of horticultural crops in Sudan. Their significance is increased after the introduction of *Bactrocera invadens*. This study was commenced during 2007–2009 to find out species composition of fruit flies at Khartoum and Kassala, determine host range and assess their field response to protein hydrolyzate (Nulure, Torula yeast, AFFI and GF-120) and male lures (Methyl Eugenol, Terpinyl Acetate, Culure, and Trimedlure). More than 10 species belong to 3 genera were recorded; *Ceratitidis capitata*, *C. cosyra*, *C. quinaria*, *B. invadens*, *Dacus ciliatus*, *B. cucurbitae*, *Dacus* sp, *Paradalopsis incompleta* and *B. longistylus* and two other not identified species. Mango and guava were found attacked by *C. capitata*, *B. invadens*, *C. cosyra* and *C. quinaria*. Grape fruit, orange, mandarin and banana were found infested by *B. invadens*. Lemon and anonna were recorded as new hosts of *B. invadens* at Kassala. Cucumber, water melon, musk melon were found infested by *Dacus ciliatus*, *Dacus* sp and *B. cucurbitae* while Sidir *Zizyphus spinacristi* and jubajuba were found infested by *Paradalopsis incompleta*, Usher *Calotropis procera* was attacked by *B. longistylus*. *Ceratitidis capitata*, *B. invadens*, *C. cosyra*, *C. quinaria*, *B. cucurbitae* were respond positively to Nulure, Torula yeast, AFFI and GF-120. *B. invadens* was respond to Methyl Eugenol while *Ceratitidis capitata*, *C. cosyra* and *C. quinaria* were attracted to Terpinyl Acetate and *Ceratitidis capitata* alone was attracted to Trimedlure. Torula yeast gave better results of trapping of all fruit fly species during the study period of the consecutive seasons 2007 and 2008.

**Keywords:** Fruit flies, male lures, protein hydrolyzate, Tephritidae