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Species composition of fruit flies from mango orchards in three ecological zones in Ghana

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ABSTRACT

Objective

This study was carried out to assess the range of fruit fly species from mango orchards in three agro-ecological zones in Ghana (Coastal Savanna (CS), the Transitional (TT) and Guinea Savanna (GS) zones) where mango is commercially grown.

Methodology and results

A trapping exercise was undertaken for two successive fruiting seasons in 2009 and 2010, using traps baited with three different attractants (Methyl eugenol (ME), Terpinyl

acetate (TA) and Trimedlure (TML). A total of 39, 011 fruit flies were collected during the period, with 9,398 (24.1%) and 29,613 (75.9%) flies collected during the 2009 and 2010 seasons, respectively. Five fly species (in two genera), *Bactrocera invadens, B. cucurbitae, Ceratitis cosyra, C. ditissima* and *C. capitata* were identified. The highest relative fly densities (number of flies per trap per day, F/T/D) ranged from 1.86-31.40 and 16.25-121.39 for the 2009 and 2010 seasons, respectively. The most abundant flies in all six localities of the three zones were *B. invadens*, followed by *C. cosyra* and *C. capitata.* Even though all three zones had three species in common, the proportions varied.

Application of findings

These findings have applications in formulating management strategies to mitigate the fruit fly menace in Ghana.

Key words

Species range, agro-ecological zones, fruit flies, attractants, relative fly density, Ghana