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ABSTRACTS

3_101. SEASONAL ABUNDANCE OF MANGO FRUIT FLY (DIPTERA: TEPHRITIDAE) IN MANGO AND CASHEW ORCHARDS IN CENTRAL AND NORTH BENIN, AND ECOLOGICAL IMPLICATIONS FOR ITS MANAGEMENT

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We report the results of a large-scale study from 2005 to 2009 on seasonal population fluctuations of fruit flies (Diptera: Tephritidae) in mango and cashew orchards in the Borgou Department, Benin. During monitoring in mango, over 2 million specimens from 25 species were captured, including three species of *Bactrocera*, 11 of *Ceratitis* and 11 of *Dacus*. We observed significant differences in *Bactrocera dorsalis* counts between high and low mango production years from 2005 to 2008, but not in *Ceratitis cosyra* counts. The native species, *C. cosyra*, was the most abundant species during the dry season, reaching peak populations in early May, while the exotic species, *B. dorsalis*, was the most abundant species during the rainy season, peaking in June. Preliminary results underlined the role of nine species of wild hosts and seven cultivated species around mango orchards that played an important role in maintaining *B. dorsalis* in this Sudan zone all year round. *C. cosyra* was present during nine months of the year. During the first 14 weeks of monitoring in cashew orchards situated near mango orchards, most flies (62%) were captured in traps in cashew orchards, showing the importance of early fruit fly control on cashew before the mango season. Based on these results in Benin, we propose that the effective and compatible control methods for *C. cosyra* proposed in the IPM package of the West African Fruit Fly Initiative (WAFFI) project, initially developed in Benin, should be extended in a large regional tephritid control program in similar zones of West Africa.

Keywords: *Bactrocera dorsalis*, *Ceratitis* spp., seasonal distribution pattern, host range, Sudan zone, West Africa