Variations in carambola infestation rates by Bactrocera carambolae drew and hancock (Diptera: Tephritidae) with fruit availability in a carambola orchard

ABSTRACT

The relationship between the infestation rate of carambola fruits by Bactrocera caram-bolae Drew and Hancock was investigated in a carambola orchard. Phenology of the fruits was found to influence percentage infestation of fruits by B. carambolae. The proportion of unbagged or susceptible fruits infested varied with time of year and tended to decrease with the increase of unbagg-ed fruits available on the tree. The number of ovipunctures per fruit varied with fruit size and was also found to be indicative of the number of adult insects (B. carambolae and parasitoids) that will emerge from each fruit. Higher number of susceptible fruits available on each tree also decreased both the number of ovipunctures per fruit and the number of eggs laid per fruit, which could possibly be due to the strategy of spreading the risk adopted by the female B. carambolae or a result of random selection with more hosts available. The main parasitoids recorded were Biosteres vandenboschi (Fullaway) and B. arisanus (Sonan). The mean percentage of parasitism was 38.3% and it followed roughly that of infestation of fruits.