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Effect of trap colour, cultural and sanitation measures on density of *Bactrocera zonata* in Sudan

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Abstract

Horticulture is one of the most important agricultural sub-sectors in Africa, providing income, creating jobs and enhancing food and nutrition security. Fruit flies, *Bactrocera* spp., are among the most destructive fruit/vegetable-eating agricultural pests in the world, particularly in African countries such as Sudan. The objective of this study was to investigate the effect of trap colour, cultural and sanitation Measures on density of peach fruit fly, *Bactrocera zonata* (Saunders) (Diptera: Tephritidae). Several field surveys were conducted in the Gezira State, Sudan during season 2016/2017. Three locations were selected in the study area and three sites were selected at each location. An orchard was randomly selected at each site and five directions at each orchard were determined. Methyl Eugenol trap was used to estimate the effect of colour, cultural and sanitation measures on density of the fruit flies. Data were subjected to descriptive analysis and analysis of variance procedure. The results showed that during the flowering period of mango, peach fruit fly (*Bactrocera zonata*) was highly attracted to other colours rather than the yellow colour, while, during the fruiting the insect was highly attracted to the yellow colour compared to the other colours. The density of the insects was significantly low in the well managed orchards (8.7 insects per trap per week) compared to the poor managed orchards (36.9 insects per trap per week). So the trap colour, composition of the horticultural crops, well cultural practices and good sanitation measures should be addressed when dealing with the control of peach fruit fly.

Keywords: Bactrocera, colour, methyl eugenol, peach fruit fly, sanitation