

EFFECT OF CARDINAL GEOGRAPHICAL DIRECTIONS ON THE EFFICIENCY OF YELLOW STICKY BOARD TRAPS IN ATTRACTING CERTAIN INSECT PESTS INFESTING SOME MEDICINAL PLANTS

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ABSTRACT

Field studies were conducted at Plant Protection Research Station at Kaha region, Qalyoubia Governorate on the effect of the main geographical directions (north, south, east and west) on efficiency of yellow sticky board traps in attracting aphids (*Aphis gossypii* Glover), whiteflies *Bemisia tabaci* (Genn.) and jassids, *Empoasca lybica* deBerg infesting guar (*Cyamopsis tetragoloba* Linne), roselle (*Hibiscus sabdariffa* Linne) and peppermint (*Mentha piperita* Linne) during 2006 and 2007 growing seasons. Results showed that the highest numbers of trapped aphids, jassids and whitefly were recorded on traps faced to eastern direction on the guar and roselle crops, where the corresponding seasonal mean counts in the two seasons altogether were 11.88, 16.97 and 151.89 individuals/trap in guar crop and 15.40, 22.40 and 205.37 individuals/trap for the roselle crop, respectively.

In peppermint, the yellow sticky board traps were more suitable to capture the maximum number of aphids and whiteflies when directed to eastern direction throughout the tested seasons under investigation (12.63 and 219.62 individuals/trap, respectively), on the other hand, the highest trapped jassids of 12.70 individuals/trap was captured with southward traps. Contrary, the lowest numbers of the three studied insect species were recorded on the traps faced to west direction, except for *A. gossypii* in the case of peppermint, as the traps located in the north direction caught the lowest numbers (8.18 individuals/trap during the two seasons together). However, the observations clearly indicated that the remaining tested traps in the other directions trapped moderate numbers of the three studied insects.

INTRODUCTION

Guar (*Cyamopsis tetragoloba*), roselle (*Hibiscus sabdariffa*) and peppermint (*Mentha piperita* Linne) are the most important medicinal and aromatic plants for human health as well as for domestic animals. Recently the cultivated area with these plants increased to cope the increasing needs for exportation and local consumption. Guar seeds, peppermint leaves and Roselle are used in medical industries, as well as peppermint leaves are used as a spicy in carry powdered. Some insect species infest these plants and cause severe damage in the yield (Young and Edwards, 1990).

The effects of sticky traps on the population abundance of different pests

infesting different plants were studied by many investigators. Nucifora *et al.*, 1983; Gillespie and Quiring, 1987; Edigaryan and Eritsyayn, 1988; Jimenez and Delgado, 1991; Roychoudhury and Jain, 1993; Emam, 1999; Mannaa, 2000; Costa *et al.*, 2002; Mutwiwa and Tantau, 2005 and Ramegowda *et al.*, 2007.

The present study was carried out to study the attraction of certain insect pests infesting some aromatic and medicinal plants (guar, Roselle and peppermint) to yellow sticky broad traps facing the four cardinal geographical directions (north, south, east and west).