INTRODUCTION

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Common bean (*Phaseolus vulgaris* L.) is considered one of the most important leguminous vegetable crops in Egypt. It is cultivated in many Governorates either for export or for local consumption.

It occupies the second grade in export among the legume crops. The cultivated area of this crop was estimated at 37600 feddans for green pods and 27450 feddans for dry seed yield in 1998 (*according the Agricultural Economic Reports, Ministry of Agriculture, Dokki, Giza*, 2003).

Common bean is cultivated either for green pods (contains 1.7% protein) or dry seeds (contains 24.9% protein) or consumed as canned. It can be cultivated under both warm and cool conditions.

Common bean as other edible crops, infested with different pests in the field and in store causing severe damage. The most important of the field pests are leaf miners, whiteflies, aphids and the spider mites.

The broad bean leaf miner, *Liriomyza trifolii* (Burgess) is one of the main insect pests infesting common bean plants (**Doss *et al.*, 1992 and Omar and Faris, 2000**). In addition, it is one of the few polyphagous herbivorous *Agromyzid* species (**Spencer, 1973**).

The whitefly, *Bemisia tabaci* (Genn.) and aphids are also, considered main insect pests infesting common bean and cause losses not only in quantity but also in quality of the bean yield (**Shalaby, 1998**).

The whiteflies are minute, usually inconspicuous, and many are extremely injurious. They are efficient vectors of plant

viruses (**Bock *et al.*, 1974**). They feed on the plant sap and cause leaf drop and may prevent the fruit maturity. Whiteflies also produce sticky honeydew, which cause damage to the crop (**Perkins 1983 and 1987**). Aphids are a group of sucking-sap insect pests causing many damages to various vegetable crops. They also, play an important role as a vector of plant viruses and produce honeydew.

The spider mites are plant feeders of considerable economic importance, infesting almost major vegetable and fruit crops. They usually feed on the leaves injuring the epidermis resulting in blotching, stippling or bronzing and sometimes even accompanied by leaf full. Majority of them are polyphagous and have a wide rang of hosts. Some of the species are known to be of great economic importance as *Tetranychus urticae* Koch. They cause many indirect damages by transmitting several microorganisms such as viral and fungal pathogens.

The present work include the following topics:

- Population studies to estimate the population abundance of major pests infesting common bean plants during nili and summer plantations.

- Evaluation the efficiency of new control measures of common bean pests namely, the organophosphorus compound, Selecron 72%EC. (Profenofos), the two botanical insecticides (Achook 0.15% & Bemistop 21.1% EC.), the bioinsecticide, Biosect 32 x 10^6 conidia/mg (*Beauveria bassiana*) and the insect growth regulator, Admiral 10% EC. (Pyriproxyfen).

-Besides the effect of the sub lethal concentrations of the aforementioned treatments was studied on some biological aspects of *L. trifolii* and the aphid, *Aphis craccivora* Koch.

-Furthermore, Efficiency of the parasitoid, *D. isaea* for controlling *Liriomyza trifolii* was also investigated.