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Introduction of Integrated Pest Management system for *Leucinodes orbonalis* GUEN (Lepidoptera : Pyralidae) on *Solanum melongena*.

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Leucinodes orbonalis GUEN (Lepidoptera : Pyralidae) is an important pest which damages the pods and shoots of the *Solanum melongena* L. (Solanaceae).

The percentage mortality from eggs to adults was 80.14. Life span varied between 1.5 to 3 (n = 10) days for male and 2.5 to 4 (n = 10) days for female. Mean fecundity of a female insect (in the laboratory) was 203.8 ± 105.9 (n = 10). Larval stages were determined by using the head capsule width measurements. There are five larval stages of *L. orbonalis*. The pupation period varied between 7 to 11 days.

In the second step, the effect of chemical fertilizer and compost fertilizer on the yield of *Solanum melongena* and infestation level of *Leucinodes orbonalis* was studied. From this experiment it was clear that the compost treated plants had higher yield and low infestation than the chemical fertilizer treated plants. The percentage of pod infestation levels of the plants treated with compost fertilizer, plants treated with chemical fertilizer and the plants not treated with any fertilizer were 35.44, 63.04 and 57.14, respectively. The total shoot infestation levels on the same treatments were 8.551, 15.57 and 6.101, respectively. The yield obtained from the plants treated with compost fertilizer, the plants treated with chemical fertilizer and the plants not treated with any fertilizer were 12.083, 6.174 and 3.691 Kg/plot, respectively for the first three month period.

In the third step of this study **Integrated Pest Management** program for the *S. melongena* was introduced. In this program cultural methods, pesticide application (chemical pesticides recommended by the Department of Agriculture and home made pesticide – prepared in the laboratory) and partial resistant variety were used. There were no significant difference ($P < 0.05$) of the damage between the plants treated with chemical pesticide and the plants treated with the pesticide which prepared at the laboratory.