ABSTRACT

THE EFFECT OF SOME PLANT EXTRACTS ON THE DIFFERENT BIOLOGICAL STAGES OF *Tuta absoluta* (Meyrick, 1917) (Lepidoptera: Gelechiidae).

Melike ŞENEL

M.Sc. Thesis, Department of Plant Protection
Supervisors: Prof. Dr. Hüseyin BAŞPINAR
Prof. Dr. Errol HASSAN
2013, 53 pages

This study aimed to determine the effects of ethanol and hexane extracts of *Laurus nobilis* L. and *Rosmarinus officinalis* L. (1-30 mg/ml) on *Tuta absoluta* (Meyrick) in terms of deterrent effects to egg laying, toxic effects to laid eggs from egg hatching to adult stage, and toxic effects to the third stage of larvae and pupae until adult stage. Experiments were conducted under laboratory conditions of 25±1^{0}C, relative humidity 65±5 % and 16:8 hours light:dark. Applications were made to tomato leaflets, prepared as food for *T. absoluta,* by dipping for 3 seconds in to extracts.

As a result, it was observed that both *L. nobilis* and *R. officinalis* extracts exhibited strong deterrent effects, up to 100 % to egg laying by *T. absoluta* females. In addition, the hexane extracts of *L. nobilis* and *R. officinalis* were quite toxic to eggs from egg stage to adult, and highly toxic also to larvae and pupae when applied in these stages. The higer concentration revealed the higher mortality rate up to 100 % in both egg and larva stages.

Key words: Ethanol, Hexan, *Laurus nobilis, Rosmarinus officinalis,* Plant extract, *Tuta absoluta,*