

**دراسات بيولوجية وهستوباثولوجية على تأثير بعض المستخلصات  
النباتية على دودة ورق القطن الكبرى (سبودوبتر التيوراليس )**

**إعداد**

**حنان أبو القاسم محمد بطلي**

*Spodoptera littoralis* (Boisd.)

(Lepidoptera, Noctuidae)

نبات الثوم *Allium sativum* ، نبات الزعتر *Thymus vulgaris* ، نبات  
عين الشيطان *Abrus precatorius*

*S. littoralis*

(Boisd.)

( - - )

( - )

.( - )

.

( , )

.

**BIOLOGICAL AND HISTOPATHOLOGICAL STUDIES  
ON THE EFFECTS OF SOME BOTANICAL  
EXTRACTS ON THE COTTON LEAFWORM  
*SPODOPTERA LITTORALIS* (BOISD.) (LEPIDOPTERA :  
NOCTUIDAE)**

By  
**Hanan Abo AlKasem Mohamed Bosly**

**Abstract**

1. *Spodoptera littoralis* (Boisd.) (Lepidoptera, Noctuidae) considered as one of the most agricultural pests and widely spread in the middle east region, this pest it is the most damaged to numerous types of the agricultural crops.
2. There is more than one plant that used in the study and produced high effectiveness and clear toxicity against *S. littoralis* (Boisd) these plants are *Allium sativum* , *Thymus vulgaris* and *Abrus precatorius* dissolved in (acetone , ethanolic and petroleum ether)
3. The toxicological studies showed existence of clear homogeneity in obtained results, where there was an increase in toxicity rates with increased concentrations for all plant extracts on some biological aspects such as larval weight, larval mortality, pupation, pupal weight,

adult emergence, sex ratio, fecundity, fertility, and longevity

4. Our results clearly indicated certain morphological changes (malformations) , it was found that all these effects occur under all the used dosages for all developmental stages (larvae- pupae and adults) , the intermediate stages also had been showed, (larva - pupae and pupae - adult).
5. The histological examination assured that the tested extracts induced several histopathological symptoms in the treated larvae such as degeneration in the muscle layers, disorganization in the epithelial cells, absence of nuclei, vacuolizations, separation of peritrophic membrane as well as detachment of the basement membrane of the mid- gut, Also fat body shows sever changes like shrinkage, damage and vacuolization .As well as ovaries and testis showed histopathological changes such as shrinkage of oocytes , degeneration of the follicular epithelium , vacuolization and histruccion of nurse cells , histruccion in the different stages of spermatogenesis, vacuolization as well as degeneration in the epithelial sheath and testicular follicles was also observed.