



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Ain Shams University Information Network
جامعة عين شمس

شبكة المعلومات الجامعية

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شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

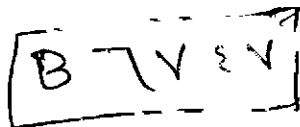
في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of
15-25- c and relative humidity 20-40%

بعض الوثائق الأصلية تالفة



بالرسالة صفحات نم ترد بالاصل



**Physiopathological studies on bacterial
infection of cotton leaf worm
*Spodoptera littoralis***

A Thesis

Submitted in Partial Fulfillment of the Requirements
For the Award of the Degree of

Master of Science

To

The department of Entomology
Faculty of Science, Ain Shams University

By

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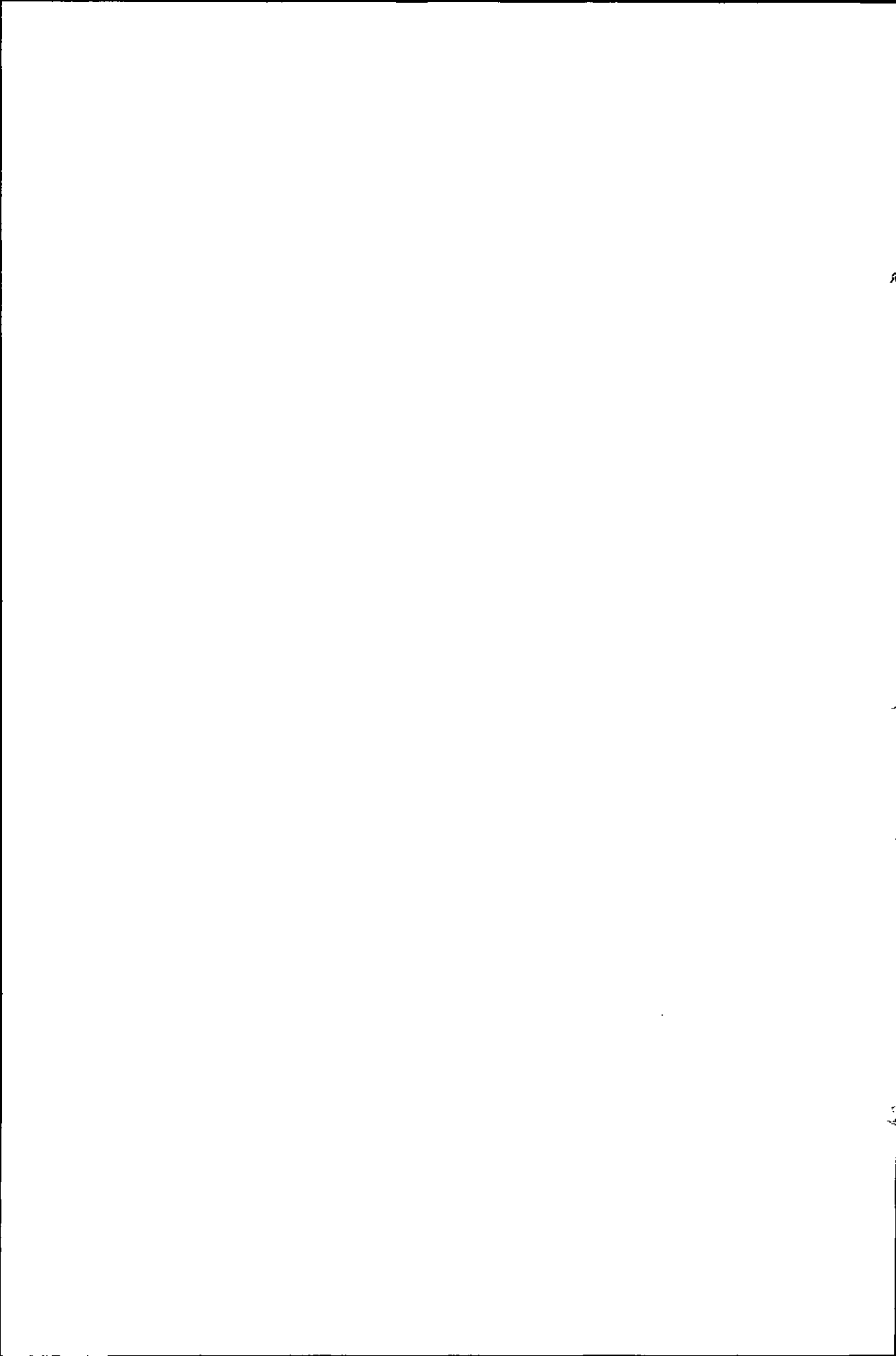
Professor of Entomology , Plant Protection

Research Institute, Agriculture Research Center

Cairo

Egypt

2000



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infection of cotton leaf worm
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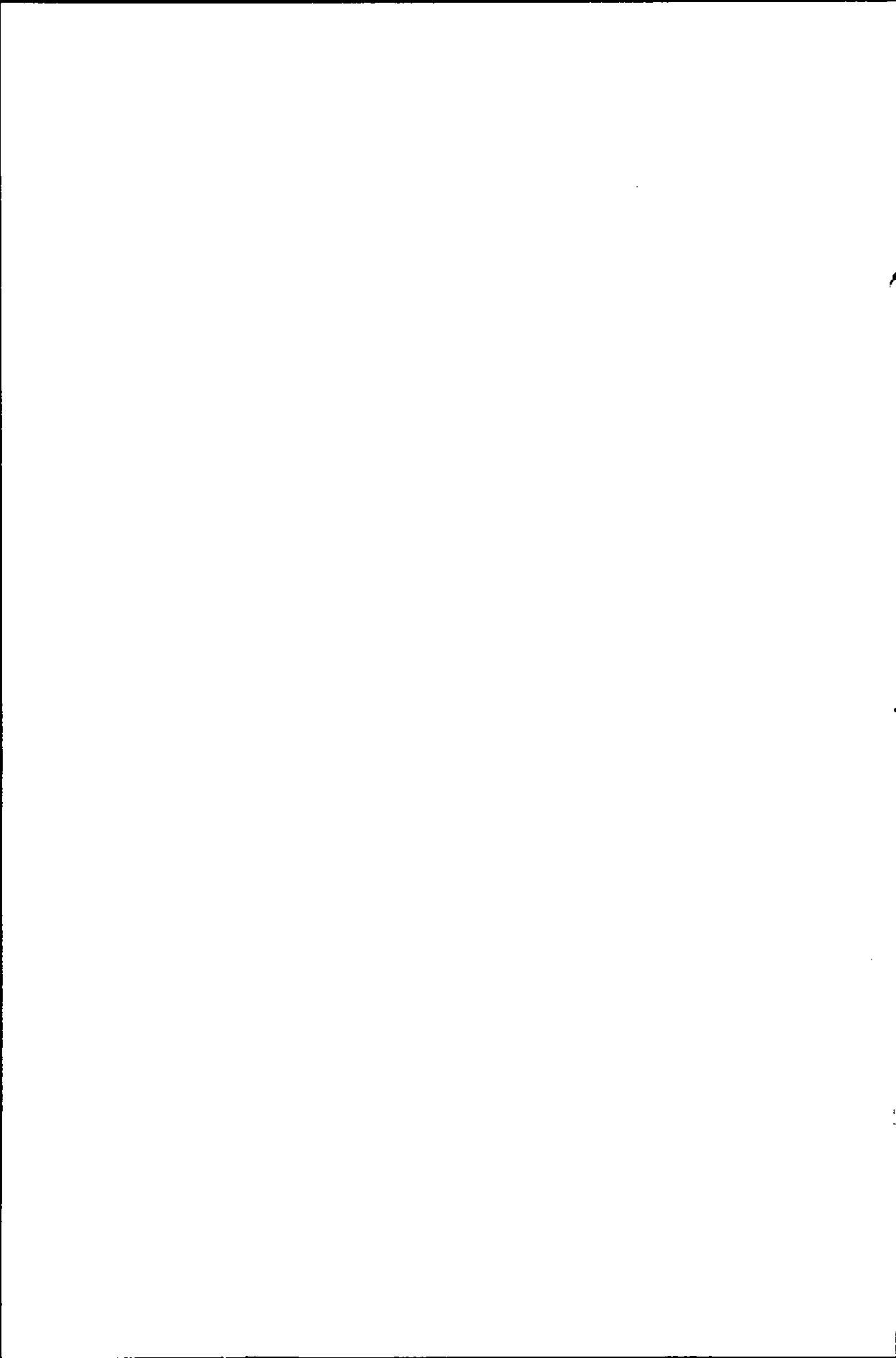
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Approval sheet

**Physiopathological studies on bacterial
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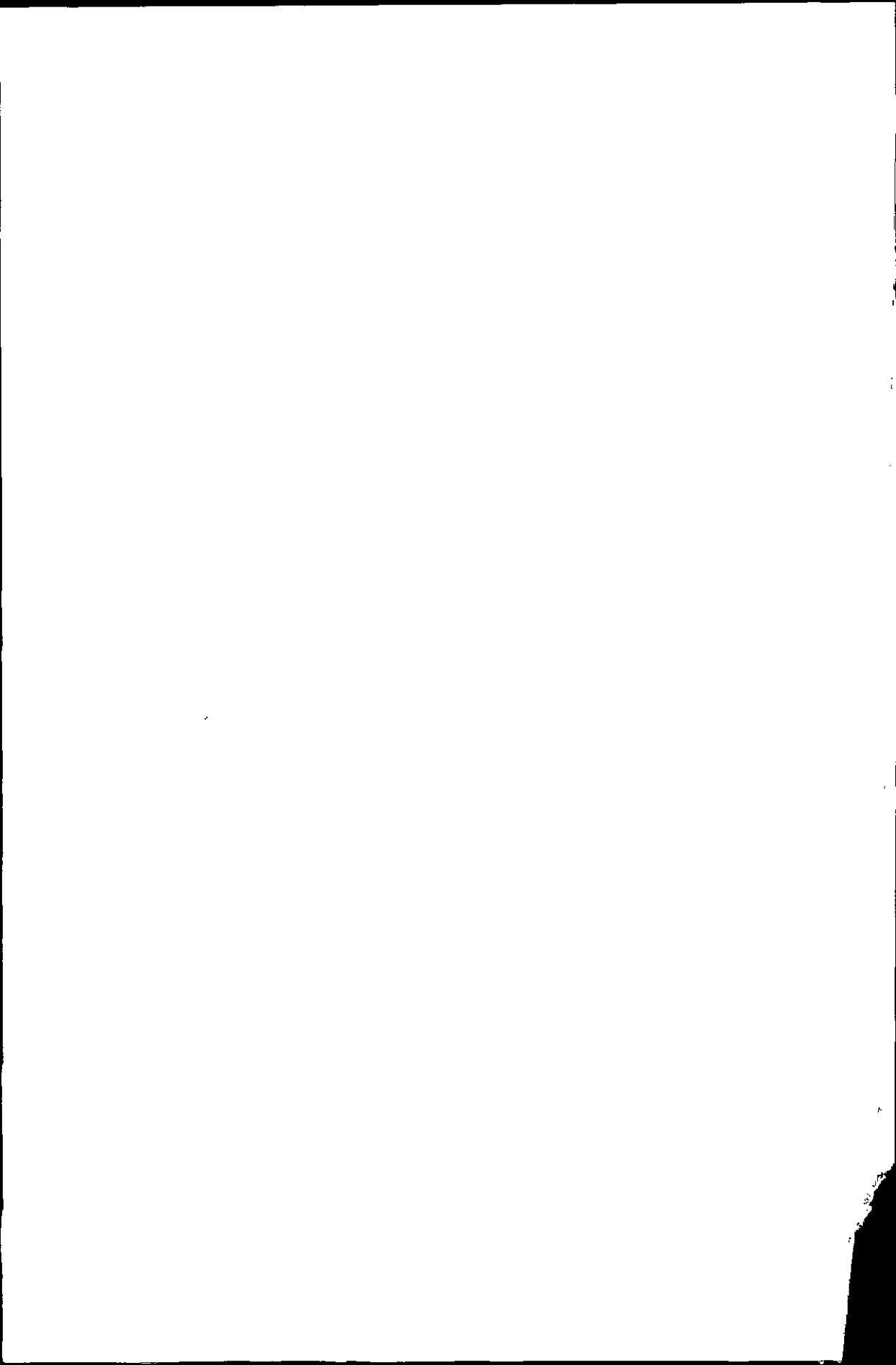
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Date: / / 2000



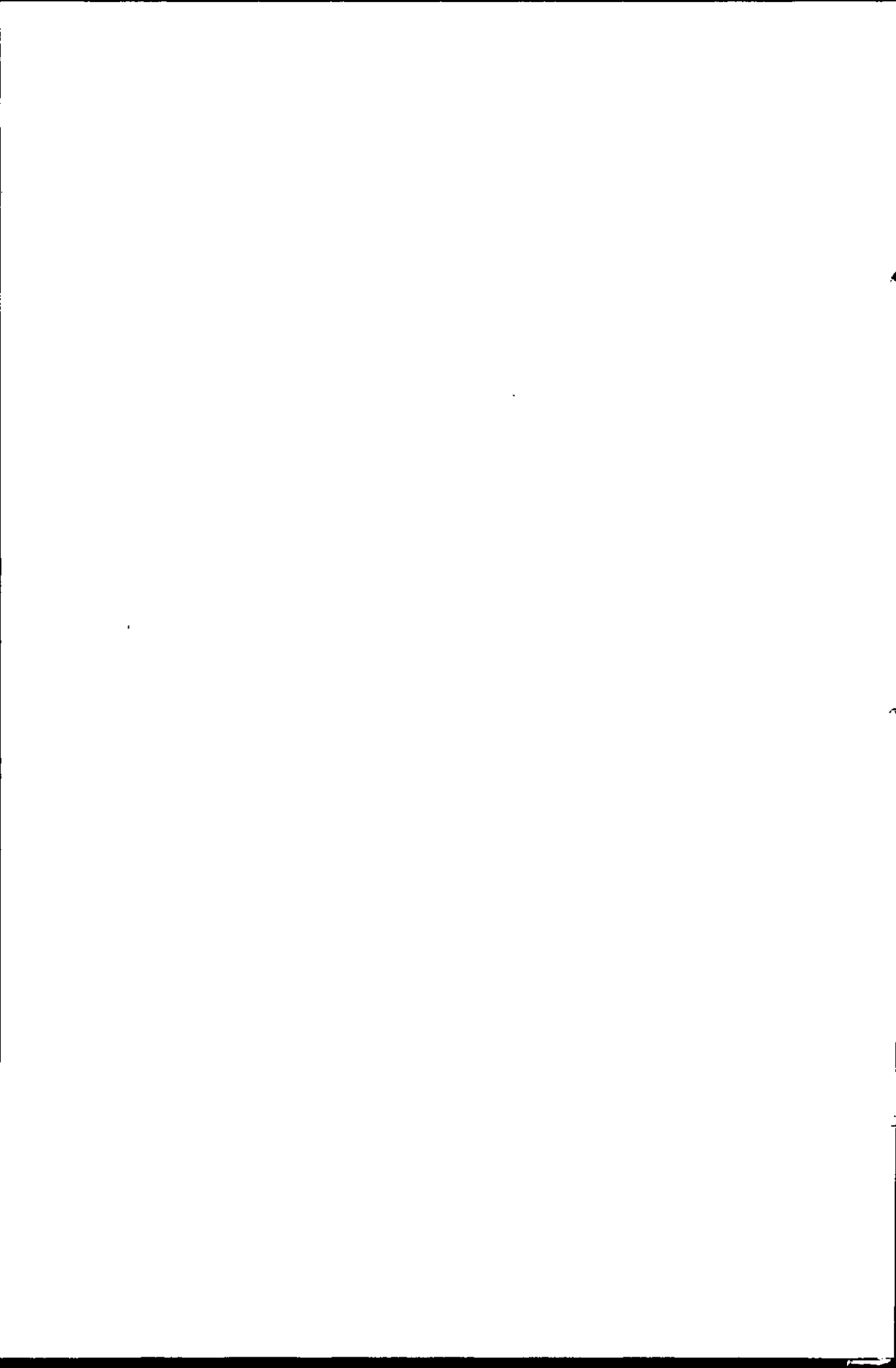
ABSTRACT

The physiology of the cotton leaf worm, *Spodoptera littoralis* (Boisd.) larvae infected with different concentrations of *Bacillus thuringiensis* var. *kurstaki* (Dipel-2x) was investigated. Leaf - dipping technique was used to carry out this study and induced the following.

The 2nd larval instar demonstrated a highly susceptible level towards the Dipel - 2x, the 3rd and 4th larval instars exhibited moderate susceptibility while the 5th and 6th larval instars showed relatively very low susceptibility. The larval treatment with different concentrations of Dipel -2x for 48 hrs influenced the reproductive capacity of the tested insects from different aspects: reducing adult emergence, increasing the percentage of different malformation, reducing fecundity, and prolonged the generation period. Pupation increased with decreased the bacterial concentration. Reduction in adult emergence reflects the effect of the toxin on the larvae before pupation. Also, the bacterial infection induced several changes in the haemolymph contents. Highly significant reduction in the protein content as the concentration decreased. Highly significant reduction in the lipid content, the activities of acetylcholinesterase and lactic acid dehydrogenase as the concentration increased. A significant reduction in the activity of acid phosphatase as the concentration increased. A significant increase in the activity of alkaline phosphatase as the concentration increased.

KEY WORDS:

Bacillus thuringiensis var. *kurstaki*, endotoxin, *Spodoptera littoralis*, biology, lipids, proteins, enzymes, acid phosphatase, alkaline phosphatase, acetylcholinesterase, and lactic acid dehydrogenase



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