

## **EFFECT OF LETTUCE SEED OIL (LSO) ON SOME ECONOMIC TRAITS AND HAEMOLYMPH PROTEIN PROFILE OF THE MULBERRY SILKWORM, *BOMBYX MORI* L.**

**Rima Shahin<sup>1</sup>, G. Gadelhak<sup>1</sup>, Souad M. Mahmoud<sup>2</sup>, E. I. El-Agamy<sup>3</sup>, and M. Idriss<sup>1</sup>**

<sup>1</sup>Department of Applied Entomology, Faculty of Agriculture, Alexandria University, Egypt.

<sup>2</sup>Sericulture Research Department, Plant Protection Research Institute, Agricultural Research Centre, Giza, Egypt.

<sup>3</sup>Department of Applied Medical Sciences, Faculty of Community, Qassim University, KSA.

E-mail: rimashahin123@yahoo.com

### **ABSTRACT**

The effects of lettuce seed oil (LSO) on the economic traits of the mulberry silkworm, *Bombyx mori* L. and its impact on total haemolymph protein profile of the fifth instar larvae were studied. Fourth and fifth instar larvae of *B. mori* were fed on mulberry leaves supplemented with different concentrations (0.01 to 1.00 %) of LSO. Treatment of 0.10% LSO proved to be the most effective since the larval, cocoon and shell weight and the number of deposited eggs were significantly higher when compared with the control. Changes in haemolymph proteins of 5<sup>th</sup> instar larvae of *B. mori* fed with LSO were monitored quantitatively and qualitatively using SDS-PAGE technique. Haemolymph proteins exhibited a gradual increase, subsequently to reach the maximum level by the end of 5<sup>th</sup> instar. The SDS-PAGE electrophoretic analysis of haemolymph proteins revealed the existence of 16 – 26 bands. Feeding of *B. mori* larvae on mulberry leaves treated with 0.10 % LSO resulted in a significant enhancement in quantity and quality of protein.

**Key words:** *Bombyx mori* L., haemolymph proteins, lettuce seed oil, silkworm.