

## ABSTRACT

Khasanah, Anis Rokhmatun. 2011. Utilization of Oil Seeds *Jatropha* (*Jatropha curcas* L.) For Vegetable Insecticides Against Larvae of *Spodoptera litura* F. Mortality (Armyworm). Thesis, Department of Biology, Faculty of Science and Technology, Islamic University of Malang State Maulana Malik Ibrahim. Advisor: Ir. Liliek Harianie, MP., Ir. Tukimin, SW. and Dr. drh. Bayyinatul Muchtarromah, M.Sc.

Keywords: Oil Seeds *Jatropha Curcas* (*Jatropha curcas* L.), vegetable insecticides, mortality, *Spodoptera litura* F.

The application of synthetic chemical insecticides can cause various negative impacts include: pest resistance, resurgence, the emergence of secondary pests, soil pollution, poisoned user, and poison the host. *Jatropha* seed oil (*J. curcas*) contains chemical compounds such as kurstin, forbol esters, triglycerides, alkaloid compounds. This research was carried out aimed to, (1) know the effect of various concentrations of oil seed *jatropha* (*J. curcas*) accession 2M IP and IP 2A on mortality of larvae of *S. litura*, (2) know the solution concentration of oil seed *jatropha* (*J. curcas*), which effectively influence the mortality of *S. litura*, (3) know the time that is most effective in improving mortality of larvae of *S. litura*, (4) understand the interaction between insecticide concentration of vegetable oil seed *jatropha* (*J. curcas*) and accession, and (5) the effect of continued effects of insecticide seed oil *Jatropha* (*J. curcas*) accession 2M IP and IP 2A on growth *S. litura*.

Research conducted at the Laboratory of Entomology Research Institute for Tobacco and Fiber Crops (BALITTAS) Karangpulo-Malang, May-August 2010. The study was a factorial experiment using a randomized block design with 3 replications, each replication consisting of 50 fish larvae. The treatment consisted of two accessions of *Jatropha* accessions IP (Inprof Population) 2M and IP (Inprof Population) 2A obtained from the parent farm *jatropha* Kp. Asembagus and Kp. Muktiharjo), with various concentrations: (1) water control, (2) control water + detergent (3) 5 ml MJP +1 g detergent / 1 L water, (4) 10 ml MJP +1 g detergent / 1 L water, (5) 20 ml MJP +1 g detergent / 1 L water, (6) 40 ml MJP +1 g detergent / 1 L water, (7) 80 ml MJP +1 g detergent / 1 L water. Observed variables include mortality, severe pre-pupae and pupae, the number of eggs and hatching eggs. Mortality observations were carried out every 24 hours, 48 hours, 72 hours, 96 hours, 120 hours after spraying.

The results showed, insecticide seed oil *jatropha* (*J. curcas*) affect the mortality of larvae of *S. litura*, the effective concentration on mortality of larvae is 40 ml at 120 hours after spraying with an average mortality 2M = 64% IP and IP 2A = 66%, there is no interaction between accession and concentration, the chemical content of *jatropha* seed oil insecticide to reduce weight and pre-pupae and pupae reduced the number of eggs and hatching eggs.