

EFFECTIVENESS TEST OF SUREN TOON LEAVES (*Toona sureni*) AND SOURSOP LEAVES (*Annona muricata*) EXTRACTS ON THE MORTALITY AND DEVELOPMENT OF CABBAGE LEAVES CATERPILLAR PESTS (*Plutella xylostella*)

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ABSTRACT

This research aimed to evaluate the effectiveness of suren toon and soursop leaves extracts as botanical insecticides against *P. xylostella*. The research was conducted using an experimental method with a Completely Randomized Design (CRD) consisting of eight treatments: P0 (control, 100 ml of distilled water), P1 (chemical insecticide Emamectin Benzoate Cyclone 5.7 WG with a concentration of 0.5 g/L), P2 (10% suren toon), P3 (20% suren toon), P4 (10% soursop), P5 (20% soursop), P6 (combination of 5% soursop + 5% suren toon), and P7 (combination of 10% soursop + 10% suren toon), each with three replications. The application method used was the leaves-dipping method, where cabbage leaves that had been dipped in the extract solution were given as larval feed. The observed parameters included mortality of *P. xylostella* larva, percentage of pupae formed, percentage of imago formed, time for larva becoming pupae, time for pupae becoming imago, feeding activity, effectiveness of botanical insecticides. Observation data were analyzed using orthogonal contrast test analysis. Suren toon leaves extract and soursop leaves extract have a significant effect on the mortality and development of cabbage caterpillars (*Plutella xylostella*), with optimal concentration is the combination of suren toon and soursop leaves extracts at 10% concentration.

Keywords: Suren toon leaves extract, Soursop leaves extract, *Plutella xylostella*, Botanical insecticide, Emamectin Benzoate insecticide.