

EFFECT OF SOURSOP LEAVES AS BOTANICAL INSECTICIDE TO SUPPRESS *Plutella xylostella* POPULATION

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ABSTRACT

Plutella xylostella is one of the most destructive insect pests of cruciferous vegetables. The leaves of soursop plant is one alternative for substituting synthetic insecticides. This study was conducted to determine the best concentration of soursop leaves extract that most suppresses the population of *Plutella xylostella*. The study was conducted from August to October 2024 at the UPN Veteran Yogyakarta plant protection laboratory. This study used a completely randomized design (CRD) with 6 treatments and 5 replications. The treatments include: P0: Negative control (distilled water), P1: 10% concentration extract, P2: 15% concentration extract, P3: 20% concentration extract, P4: 25% concentration extract, and P5: 30% concentration extract. The data obtained were tested using the ANOVA test at a level of 5%. if a significant effect was obtained, it was further tested using the LSD test at a level of 5%. The result of this research show that soursop leaf extract had an effect to suppress *P. xylostella* population and P5 (30% extract concentration) causes the highest mortality and the highest in inhibiting the growth of larvae into pupae and imago among other treatments of soursop leaf extract for *P. xylostella*, but on the time of larval death parameter the treatment had no significant effect. To suppress *Plutella xylostella* pest population to 50% of the population, a soursop leaf extract concentration of 37.4% is required and to suppress the population to 95%, an extract concentration of 79.52% is required

Keywords: *Botanical pesticides, larvae, Plutella xylostella, Soursop leaf, extract*