ABSTRACT

THE EFFECT OF APPLICATION SIAM WEED EXTRACT (*Chromolaena odorata*) ON MORTALITY TWO PEST SPECIES MACGREGOR COCOA FRUIT IN THE LABORATORY

By
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Helopeltis spp. is one of the important pests of cocoa plants that can cause a decrease in very large production. *H. antonii* and *H. theivora* are two species that many cocoa crop damage in Indonesia. The attacks of these two species can reduce production by 50%. Technical culture, harvest frequently, sanitation, enfolding fruit and spraying insecticide, were less efficient and effective to reduce losses. Therefore that need an alternative pest control of *H. antonii* and *H. theivora* which was effective, inexpensive, safe and friendly environment. One of alternative controls that are most developed is the use of botanical pesticides by using plants that do not have high economic value, but potentially as a *biopesticide*. Siam weed (*Chromolaena odorata*), family Asteraceae, was one potential source of plant-based pesticides to be researched. This research was aimed to determine the effect of siam weed extract spraying (*Chromolaena odorata*) on the mortality of *H. antonii* and *H. theivora*. Five treatments were used i.e control, insecticide (permetrin), and extract of the siam weed (*Chromolaena odorata*) at 30%, 40%, and 50% of concertation. Randomized Blok Design (RBD) was set for the treatment. Each treatment was replicated three times. Data collected in this study were mortality level of *H. antonii* and *H. theivora*. The data was analyzed using ANOVA continued with Duncan test at 5% of significance level. The results showed that application of the siam weed (*Chromolaena odorata*) extract caused mortality of *H. antonii* and *H. theivora.* The siam weed extract (*C. odorata*) at concentration of 50% was more effective to control of *H. antonii* and *H. theivora* population than the extract of siam weed (*C. odorata*) at concentration of 30% and 40%. The survival of *Helopeltis* after application reach to 24 days at the siam weed extract concentration of 40%.