

EFFICACY OF HAGONOIY (*Chromolaena odorata* L.) LEAF POWDER EXTRACT  
AGAINST COCONUT LEAF BEETLE (*Brontispa longissima* Gestro) LARVAE

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By

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**ABSTRACT**

The insecticidal properties of Hagonoy was used against the Coconut Leaf Beetle (*Brontispa longissima*, Gestro) larvae using distilled water as extractant from the powder prepared from dried mature leaves. The treatments included water alone (T1); Synthetic insecticide (T2); 12.5% Hagonoy leaf extract (T3); 25% Hagonoy leaf extract (T4); 37.5% Hagonoy leaf extract (T5) and 50% Hagonoy leaf extract (T6). These were laid out in a randomized complete block design replicated four times. The larvae of *Brontispa* were introduced to the healthy coconut seedlings. The seedlings were sprayed with the test materials and were observed after 24, 48 and 72 hours. Results showed that application of Hagonoy extract at 50% (T6) resulted in insect mortality comparable with those obtained from the use of synthetic insecticide (T2). After 24 hours of application, 60% of the larvae were killed in Treatment 6. Furthermore, 100% mortality was recorded on insects treated with a commercial insecticide after 48 hours. Regardless of the level of concentration, the Hagonoy leaf extracts showed potentials to control *Brontispa longissima* larvae. Probit analysis revealed that Hagonoy leaf extract can kill 50% of the larval population at  $3.98 \times 10^5$  mg/L or equivalent to 398,000 mg/L. This concentration is between Treatment 5 (150g/400 ml or 37.5%, equivalent to 375,000mg/L) and Treatment 6 (200g/400 ml or 50%, equivalent to 500,000 mg/L), hence the  $LC_{50}$  of the extract.