

Intisari

Latar belakang: Penyakit dengue adalah penyakit viral dengan vektor nyamuk yang menyebar paling cepat di dunia. Angka insiden dengue telah meningkat 30 kali lipat pada 50 tahun terakhir. Wilayah Godean, Kabupaten Sleman masih merupakan daerah endemis Demam Berdarah Dengue (DBD). Cara menanggulangi penyakit DBD yang paling efektif adalah dengan memberantas nyamuk vektornya. Upaya yang sering dilakukan adalah penggunaan insektisida. Malation telah lama digunakan dalam penanggulangan DBD. Penggunaan insektisida dalam jangka lama dapat menimbulkan resistensi.

Tujuan: Penelitian ini bertujuan untuk mengetahui status resistensi nyamuk dewasa *Ae. aegypti* di daerah Godean terhadap insektisida malation dengan menggunakan uji hayati.

Metode: Jenis penelitian ini adalah eksperimental dengan rancangan *The Post Test Only Control Group Design*. Subyek penelitian adalah nyamuk *Ae. aegypti* yang berasal dari Godean. Penentuan status resistensi nyamuk *Ae. aegypti* terhadap malation ditetapkan dengan memajankan berbagai konsentrasi malation, termasuk dosis diagnostik CDC 50 µg/ml. Hasil dianalisis dengan analisis Probit untuk menentukan LC50 dan LC90 malation.

Hasil Penelitian: Nyamuk *Ae. aegypti* dari daerah Godean termasuk kategori resisten sedang terhadap insektisida malation. Nilai LC50 dan LC90 malation terhadap *Ae. aegypti* dari Godean didapatkan sebesar 24,5111 µg/ml dan 57,2638 µg/ml.

Kesimpulan: Nyamuk *Ae. aegypti* dari daerah Godean menunjukkan resistensi sedang terhadap insektisida malation.

Kata Kunci: *Ae. aegypti*, malation, resistensi, Godean, Demam Berdarah Dengue

Abstract

Background: Dengue is the most rapidly spreading mosquito-borne viral disease in the world. Incidence of Dengue has increased 30-fold in the last 50 years. Region of Godean, Sleman is still an endemic area for Dengue Hemorrhagic Fever (DHF). The most effective way to control DHF is by eliminating the vector mosquitoes. One way often taken was to use insecticide. Malation has long been used in the prevention of DHF. Long term use of insecticide can lead to resistance.

Objective: The aim of this study was to determine the resistance status of *Ae. aegypti* mosquitoes from Godean to insecticide malation using bioassay.

Method: This was an experimental study with *Post test only control group design*. Subjects of the study were *Ae. aegypti* mosquitoes derived from Godean. Determination of resistance status of *Ae. aegypti* to malation was done by exposing various concentrations of malation, including CDC diagnostic dose 50 µg/ml. Result were analyzed by Probit analysis to find the LC50 and LC90 of malation.

Result: The result of the study showed that *Ae. aegypti* mosquitoes from Godean were on medium resistance category to insecticide malation. LC50 and LC90 values of malation to *Ae. aegypti* from Godean were 24,5111 µg/ml and 57,2638 µg/ml, respectively.

Conclusion: *Ae. aegypti* mosquitoes from Godean showed medium resistance to insecticide malation.

Keyword: *Ae. aegypti*, malation, resistance, Godean, Dengue Hemorrhagic Fever