

## Pengaruh bacillus thuringiensis israelensis terhadap penyebaran aedes aegypti di Kelurahan Paseban, Jakarta Pusat = The effect of bacillus thuringiensis israelensis to aedes distribution in Paseban Village, Central Jakarta

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### Abstrak

Demam berdarah dengue (DBD) merupakan salah satu masalah kesehatan utama di Indonesia, terutama di Jakarta. Pemberantasan DBD dapat dilakukan dengan berbagai cara, salah satunya dengan menggunakan bahan kimia insektisida; Namun, dengan berkembangnya kesadaran masyarakat terhadap kelestarian lingkungan, kini diperlukan agent ramah lingkungan, yaitu dengan proses "pemberantasan biologis" yang menggunakan bakteri *Bacillus thuringensis* (Bti).

Penelitian ini bertujuan untuk mengetahui pengaruh Bti konsentrasi 2 ml/m<sup>2</sup> dan 4 ml/m<sup>2</sup> terhadap indeks penyebaran *Ae. aegypti*. Penelitian dilakukan di Kelurahan Paseban, Jakarta Pusat dengan desain eksperimental. Survey entomologi dilakukan pada tanggal 13 Januari 2010 dengan single larval method di 100 rumah di RW 03, sedangkan kontainer di RT 11-18 ditetesi Bti konsentrasi 2ml/m<sup>2</sup>, dan RT 5-10 dengan Bti 4ml/m<sup>2</sup> (pretest); satu bulan kemudian (14 Februari 2010), dilakukan posttest untuk mengetahui indeks penyebaran *Ae. aegypti* (house index, HI).

Hasil pretest menunjukkan HI di RT 11-18 yang mendapat Bti 2 ml/m<sup>2</sup> adalah 32% dan pada posttest didapatkan HI 30%. Di RT 5-10 yang mendapat Bti 4 ml/m<sup>2</sup>, hasil pretest menunjukkan HI sebesar 26% dan posttest 8%. Disimpulkan Bti konsentrasi 4 ml/m<sup>2</sup> lebih baik dalam menurunkan angka penyebaran *Ae. aegypti* di Kelurahan Paseban, Jakarta Pusat.

.....Dengue hemorrhagic fever (DHF) is one of the major health problems in Indonesia, especially in Jakarta. There are several ways to control this problem, on of them is using insecticide; however, as public has developed awareness toward environmental conservation, a new environmental friendly agent is needed, a proses so called "biological control" which uses *Bacillus thuringensis* (Bti) bacteria as biolarvasida. The goal of this research is to discover the effect of Bti with 2 ml/m<sup>2</sup> and 4 ml/m<sup>2</sup> concentration to the distribution index of *Ae. Aegypti*. The research was held in Kelurahan Paseban, Jakarta Pusat, using experimental design as the basis of the research. Entomology survey was done in 13 January 2010 with single larval method in 100 houses at RW 03, while the containers from RT 11-18 were given several drops of Bti 2 ml/m<sup>2</sup> concentration, and RT 5-10 with Bti 4 ml/m<sup>2</sup> concentration (pretest); one month later (14 February 2010), posttest was held to determine the distribution index of *Ae. Aegypti* (house index- HI). The result from pretest showed HI in R 11-18 that was given Bti 2 ml/m<sup>2</sup> is 32%, while in posttest the result was 30%. IN RT 5-10 that was given Bti 4 ml/m<sup>2</sup>, the pretest result showed that the HI was 26%, while the posttest was 8%. Bti 2 ml/m<sup>2</sup> concentration is as effective as Bti 4 ml/m<sup>2</sup> concentration to decrease the distribution of *Ae. Aegypti* in Kelurahan Paseban, Jakarta Pusat.