

# Efektivitas bacillus thuringiensis israelensis dalam menurunkan keberadaan larva aedes aegypti di tempat penampungan air dalam rumah =Effectiveness of bacillus thuringiensis israelensis in killing larvae of aedes aegypti in water container inside the house

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## Abstrak

Pemberantasan vektor DBD dapat dilakukan dengan berbagai cara antara lain pemberantasan biologik menggunakan bakteri. Tujuan penelitian ini adalah mengetahui efektivitas Bti konsentrasi 2 ml/m<sup>2</sup> dan 4 ml/m<sup>2</sup> dalam menurunkan keberadaan larva Ae. aegypti di TPA luar rumah. Penelitian ini menggunakan desain eksperimental dengan intervensi Bti formulasi cair konsentrasi 2 ml/m<sup>2</sup> dan 4 ml/m<sup>2</sup>. Lokasi penelitian adalah di RW 03, Kelurahan Paseban, Jakarta Pusat. Data sebelum intervensi diambil pada tanggal 13 Januari 2010 dan sesudah intervensi pada tanggal 14 Februari 2010.

Survei entomologi dilakukan dengan single-larval method di TPA luar rumah yang berada di 100 rumah di RT 11-18 (Bti konsentrasi 2 ml/m<sup>2</sup>) dan 100 rumah di RT 5-10 (Bti konsentrasi 4 ml/m<sup>2</sup>). Data diolah dengan program SPSS versi 11.5 dengan analisis menggunakan uji Fisher. Setelah pemberian Bti jumlah TPA positif di RT 11-18 (Bti konsentrasi 2 ml/m<sup>2</sup>) menurun dari 9 menjadi 7 TPA tetapi terdapat kenaikan pada TPA toren, sedangkan di RT 5-10 (Bti konsentrasi 4 ml/m<sup>2</sup>) 2 TPA positif menjadi negatif.

Disimpulkan bahwa Bti formulasi cair dengan konsentrasi 4 ml/m<sup>2</sup> lebih baik dalam menurunkan keberadaan larva Ae.aegypti di TPA luar rumah dibandingkan konsentrasi 2 ml/m<sup>2</sup>.

<i>Controlling of dengue vectors can be done in various ways such as using biological control by using bacteria. The purpose of this study was to determine the effectiveness of Bacillus thuringiensis israelensis (Bti) concentration 2 ml/m<sup>2</sup> and 4 ml/m<sup>2</sup> in reducing the presence of Ae. aegypti in containers outside the house. This study used an experimental design with intervention of the Bti concentrations of 2 ml/m<sup>2</sup> and 4 ml/m<sup>2</sup>. The observation was done in RW 03, Paseban, Central Jakarta. The data before the intervention was taken on January 13, 2010 and after intervention on February 14, 2010.

Entomology survey conducted by single-larval methods in the container outside the house located at 100 houses in RT 11-18 (Bti concentration 2 ml/m<sup>2</sup>) and 100 houses in RT 5-10 (Bti concentration 4 ml/m<sup>2</sup>). The data were analyzed with SPSS version 11.5 with the analysis using the Fisher's test. After treatment with Bti the number of positive water containers in RT 11-18 (Bti concentration 2 ml/m<sup>2</sup>) decreased from 9 to 7 water containers, but there is an increase in "toren". In RT 5-10 (Bti concentration 4 ml/m<sup>2</sup>) 2 positive water containers decrease to negative.

In conclusion, Bti concentrations 4 ml/m<sup>2</sup> is better to reduce the presence of Ae. aegypti in water containers outside the house than concentration 2 ml/m<sup>2</sup>.