Efektifitas bacillus thuringiensis israelensis dalam menurunkan indeks kontainer aedes aegypti di kelurahan Rawasari, Jakarta Pusat = The effectiveness of bacillus thuringiensis israelensis in decreasing aedes aegypti container index in Rawasari village, Jakarta Pusat

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Abstrak

Insidens demam berdarah dengue (DBD) makin meningkat setiap tahun walaupun telah banyak tindakan yang dilakukan untuk mengontrol vektornya, yakni Ae. aegypti. Hal ini menuntut ditemukannya tindakan kontrol vektor yang murah, mudah digunakan, dan minim efek samping. Penelitian sebelumnya membuktikan bahwa bakteri Bacillus thuringiensis israelensis (Bti) dapat digunakan untuk membunuh Ae. aegypti, namun penelitian tersebut hanya sebatas uji laboratorium dan semi ? lapangan. Oleh karena itu, dilakukanlah penelitian ini, yang ditujukan untuk mengetahui efektifitas Bti bentuk cair dalam menurunkan indeks kontainer Ae. aegypti di Kelurahan Rawasari, Jakarta Pusat.

Survei dilakukan pada bulan Februari dan Maret 2010 di kelurahan Rawasari, Jakarta Pusat. Larva Ae. aegypti dari tempat penampungan air (TPA) di 120 rumah diambil dengan single larval method lalu diidentifikasi. Semua TPA diteteskan Bti bentuk cair sebanyak 4 mL/m2 lalu dievaluasi satu bulan kemudian. Data di proses menggunakan SPSS versi 20 dan diuji dengan uji McNemar. Sebelum pemberian Bti, dari 261 TPA terdapat 21 TPA yang positif Ae. aegypti. Setelah pemberian Bti, terdapat penurunan jumlah TPA yang positif (menjadi 15 TPA), namun uji McNemar tidak memberikan perbedaan bermakna (p=0,230). Disimpulkan bahwa Bti bentuk cairan tidak dapat menurunkan kepadatan Ae. Aegypti. Perlu dilakukan penelitian lebih lanjut terhadap efektifitas penggunaan Bti slow-release formulation untuk memberantas Ae. aegypti.

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The incidence of dengue haemorrhagic fever (DHF) increases every year even though enormous measures to control the vector, Ae. aegypti, have been taken. Consequently, a vector-controlling method that is efficient, easy to use and less side effect is needed. Previous study stated that Bacillus thuringiensis israelensis (Bti) could be used to control Ae. Aegypti, however, the study only conducted in laboratory and semi-field setting. Thus, this study aims to know the effectiveness of liquid formulation Bti in decreasing Ae. Aegypti container index in the field setting (Rawasari Village, Jakarta Pusat).

Survey was conducted in February and March 2010 in Rawasari Village, Jakarta Pusat. The Ae. Aegypti larvae from water container in 120 houses were taken using single larval method and were identified. Bti in the liquid formulation was introduced to all containers with the dosage of 4 mL/m2. One month later, the researcher re-evaluates the presence of Ae. aegypti in the water containers. The data was processed by using SPSS version 20 and tested by using McNemar test. Before the application of Bti, 21 of 261 containers were positively identified with Ae. aegypti larvae. After the application of Bti, the number of larva-positive container decreased to 15 containers. However, the difference is not statistically significant (McNemar p=0,230). Bti in the liquid form is not effective to decrease container index of Ae. aegypti. Further study

needs to investigate the usage of Bti in slow release formulation to control Ae. aegypti.