

INDEKS ENTOMOLOGI DAN STATUS KERENTANAN JENTIK *Aedes* spp. TERHADAP TEMEPHOS DI KELURAHAN SUNGAI PINANG, KECAMATAN BUNGO DANI, KABUPATEN BUNGO, PROVINSI JAMBI

INTISARI

Latar belakang :

Kelurahan Sungai Pinang memiliki kepadatan penduduk tinggi dan endemis dengue. Keberadaan *Aedes* spp. sebagai vektor virus dengue diperparah dengan kondisi lingkungan yang kurang terkontrol, seperti banjir yang memperbanyak wadah tergenang sebagai tempat perindukan nyamuk. Variasi tipe rumah juga mempengaruhi populasi *Aedes* spp., sehingga penelitian mengenai vektor nyamuk dan penggunaan temephos perlu diteliti untuk mengidentifikasi potensi resistensi terhadap jentik *Aedes* spp.

Tujuan :

Penelitian ini bertujuan untuk mengamati indeks entomologi *Aedes* spp. di Kelurahan Sungai Pinang (1°59'13.3" S dan 102°02'55.2" E), *ovitrap index* dan angka bebas jentik, di wilayah RT 07 dan RT 18. Telur *Aedes* spp. kemudian *direaring* untuk eksperimen uji resistensi terhadap 4 dosis temephos *technical grade*.

Metode :

Penelitian ini menggunakan metode observasional desain *cross-sectional* dan eksperimen jenis *quasi-experimental*. Teknik sampling *purposive*. Data indeks entomologi, *ovitrap index*, dan angka bebas jentik dianalisis univariat, sedangkan gambaran spasial dianalisis menggunakan ArcGIS, QGIS, dan Google Earth. Analisis *lethal concentration* (LC₅₀ dan LC₉₀) dilakukan secara bivariat.

Hasil :

Indikator entomologi menunjukkan *house index* 22,35%, *container index* 15,22%, dan *breteau index* 63,92%. Nilai HI dan CI termasuk dalam kategori densitas sedang, sedangkan BI termasuk kategori tinggi. Angka bebas jentik di RT 07 dan RT 18 adalah 77,65%, masih di bawah target nasional 95%. *Ovitrap index* mencapai 89,41%, menunjukkan tingkat resiko tinggi. Status resistensi jentik terduga resisten terhadap temephos berdasarkan dosis WHO.

Kesimpulan :

Kelurahan Sungai Pinang termasuk daerah berisiko tinggi terjadi penularan dengue.

Kata kunci : *Aedes* spp., indeks entomologi, status resistensi, temephos

**ENTOMOLOGICAL INDICES AND LARVAL SUSCEPTIBILITY
STATUS OF *Aedes* spp. TO TEMEPHOS IN SUNGAI PINANG
SUBDISTRICT, BUNGO DANI DISTRICT, BUNGO REGENCY, JAMBI
PROVINCE**

ABSTRACT

Background:

Sungai Pinang Subdistrict has a high population density and is endemic to dengue fever. The presence of *Aedes* spp. as a vector for the dengue virus is exacerbated by poorly controlled environmental conditions, such as flooding, which increases the number of water-holding containers that serve as breeding sites for mosquitoes. Variations in housing types also affect the *Aedes* spp. population. Therefore, research on mosquito vectors and the use of temephos is necessary to identify the potential resistance of *Aedes* spp. larvae.

Objective:

This study aims to observe the entomological indices of *Aedes* spp. in Sungai Pinang Subdistrict (1°59'13.3" S and 102°02'55.2" E), including the *ovitrap index* and larval-free rate, in RT 07 and RT 18 areas. *Aedes* spp. eggs were then reared for resistance testing against four doses of *technical-grade* temephos.

Methods:

This research employed an observational *cross-sectional* design and a *quasi-experimental* experimental design. The sampling technique used was purposive sampling. Entomological indices, *ovitrap index*, and larval-free rates were analyzed univariately, while spatial distribution was analyzed using ArcGIS, QGIS, and Google Earth. *Lethal concentration* (LC50 and LC90) analyses were conducted using bivariate analysis.

Results:

Entomological indicators showed a *house index* (HI) of 22.35%, *container index* (CI) of 15.22%, and *breteau index* (BI) of 63.92%. The HI and CI values fall under the medium-density category, while the BI is in the high-density category. The larval-free rate in RT 07 and RT 18 was 77.65%, which is below the national target of 95%. The *ovitrap index* reached 89.41%, indicating a high-risk level. The resistance status of the larvae was suspected to be resistant to temephos based on WHO dose recommendations.

Conclusion:

Sungai Pinang Subdistrict is a high-risk area for dengue transmission.

Keywords: *Aedes* spp., entomological indices, resistance status, temephos