

Indikator Entomologi Vektor *Aedes aegypti* dan Analisis Spasial Kasus Demam Berdarah Dengue di Desa Ngepringan, Kecamatan Jenar, Kabupaten Sragen, Jawa Tengah

INTISARI

Latar Belakang: Desa Ngepringan menjadi salah satu desa dengan kasus DBD (Demam Berdarah Dengue) terbanyak di Kecamatan Jenar, Sragen. Distribusi kasus DBD mengalami peningkatan 1 kasus menjadi 29 kasus. Pengendalian DBD telah dilakukan namun masih terdapat kasus dan resistensi nyamuk terhadap insektisida sipermetrin banyak dilaporkan.

Tujuan: Mengetahui gambaran indikator entomologi *Ovitrap Index* (OI), *House Index* (HI), *Breteau Index* (BI), *Container Index* (CI), *Maya Index* (MI) nyamuk *Ae. aegypti*, status resistensi nyamuk *Ae. aegypti* terhadap insektisida sipermetrin, dan pola sebaran kasus DBD.

Metode: Penelitian ini adalah observasional deskriptif dengan rancangan penelitian potong-lintang. Pengambilan titik koordinat rumah dengan menggunakan GPS *waypoint*. Jentik nyamuk diperoleh dari pemasangan ovitrap dan survei larva secara visual pada setiap rumah di lokasi penelitian. Status resistensi diuji dengan metode *CDC bottle bioassay*.

Hasil: Nilai $20\% \leq OI < 40\%$ di lokasi Bago dan Bayanan. Nilai $OI \geq 40\%$ di Pungkruk, Ngampo, Kedungringin, Bakpo, dan Sendangrejo. Nilai $HI \geq 5\%$ di semua lokasi penelitian. Nilai $CI \geq 10\%$ di semua lokasi penelitian. Nilai $BI < 50\%$ di lokasi Pungkruk, Ngampo, dan Kedungringin. Nilai $BI \geq 50\%$ di lokasi Bayanan, Bago, Bakpo, dan Sendangrejo. Nilai MI antara 40%-63%. Status resistensi nyamuk *Ae. aegypti* terhadap insektisida sipermetrin dengan nilai mortalitas di semua lokasi antara 58%-92%. Pola sebaran kasus DBD di Desa Ngepringan adalah menyebar.

Kesimpulan: Kepadatan telur dan nyamuk termasuk dalam kategori sedang hingga tinggi, potensi dengue rendah di Ngampo, dan sedang di lokasi lainnya. Status resistensi nyamuk *Ae. aegypti* terhadap insektisida sipermetrin tergolong toleran pada lokasi Bakpo dan resisten pada lokasi lainnya. Pola sebaran kasus DBD di Desa Ngepringan menyebar.

Kata kunci: indikator entomologi, *Aedes aegypti*, resistensi, spasial

Entomological Indicators of *Aedes aegypti* Vector and Spatial Analysis of Dengue Hemorrhagic Fever (DHF) Cases in Ngepringan Village, Jenar District, Sragen Regency, Central Java

ABSTRACT

Background: Ngepringan Village is one of the villages in Jenar District, Sragen with the most cases of DHF. The distribution of DHF cases increased by 1 case to 29 cases. DHF control has been carried out but there are still cases and resistance of mosquitoes to cypermethrin insecticides has been reported.

Objective: to determine the entomological indicators such as Ovitrap Index (OI), House Index (HI), Breteau Index (BI), Container Index (CI), Maya Index (MI), the insecticide resistance status of *Ae. aegypti* to cypermethrin, and the spatial pattern of dengue cases distribution.

Methods: This research is a descriptive observational study with a cross-sectional study design. Retrieval of house coordinates are determined using a GPS waypoint. Larvae were obtained by installing ovitraps and visually surveying the larvae in each house at the location. Resistance status was tested using the CDC bottle bioassay method.

Results: $20\% \leq OI < 40\%$ at the Bago and Bayanan. OI value $\geq 40\%$ in Pungkruk, Ngampo, Kedungringin, Bakpo, and Sendangrejo. HI value $\geq 5\%$ in all research locations. CI value $\geq 10\%$ in all research locations. BI value $< 50\%$ at Pungkruk, Ngampo and Kedungringin locations. BI value $\geq 50\%$ in Bayanan, Bago, Bakpo, and Sendangrejo locations. MI value between 40%-63%. Resistance status of *Ae. aegypti* in all locations to cypermethrin with a mortality rate between 58%-92%. The pattern of dengue cases distribution in Ngepringan Village was dispersed.

Conclusion: Density of *Ae. aegypti* mosquitoes were in the medium to high category, low dengue potential in Ngampo, and moderate dengue potential in other locations. Resistance status of *Ae. aegypti* to cypermethrin was classified as tolerant at Bakpo and resistant at other locations. The pattern of dengue cases distribution in Ngepringan Village was dispersed.

Keywords: entomological indicators, *Aedes aegypti*, resistance, spatial