

FEKUNDITAS, LAMA SIKLUS HIDUP, DAN SEX RATIO IMAGO *AEDES AEGYPTI* DI LABORATORIUM (Studi pada nyamuk *Aedes aegypti* isolat Semarang)

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ABSTRAK

Latar Belakang: DBD merupakan penyakit infeksi menular yang disebabkan oleh virus dengue. Peningkatan suhu berpengaruh terhadap kehidupan vektor perkembangbiakan yang cepat, *biting rate*, reproduksi meningkat, dan menghasilkan jumlah sex ratio imago nyamuk. Setiap individu mempunyai kemampuan menghasilkan telur 50-100 butir setiap bertelur. Penelitian ini bertujuan untuk mengetahui fekunditas, lama siklus hidup, dan sex ratio imago nyamuk *Aedes aegypti* di laboratorium dengan menggunakan nyamuk isolat semarang. **Metode:** Nyamuk *Ae. aegypti* yang baru keluar dari selongsong pupa atau umur 1 hari, menggunakan 4 kandang nyamuk dengan perincian 1 kandang nyamuk terdiri dari sepasang nyamuk *Ae. aegypti* jantan dan betina. Hasil pengamatan dilakukan tiap 8 jam selama 28 hari berturut-turut di laboratorium tanpa menggunakan pendingin (AC). Hasil pengamatan dianalisis menggunakan uji univariat dan di diskripsikan masing-masing variabel. **Hasil:** Rata-rata nyamuk *Ae. aegypti* bertelur 7 kali dengan total rerata telur 36 butir/ekor/siklus, siklus gonotropik 3-4 hari sekali, rata-rata masa larva 9 hari dan masa pupa 17 jam, rerata sex ratio imago jantan 55,5% betina 44,5%. **Simpulan:** Rata-rata produksi telur nyamuk *Ae. aegypti* adalah 240 butir/ekor atau 36 butir/periode bertelur, frekuensi nyamuk *Ae. aegypti* bertelur adalah 7 kali, siklus gonotropik 3-4 hari sekali. Masa larva berkisar antara 6-13 hari dengan rerata masa larva yaitu 9 hari. Masa pupa berkisar antara 6-20 jam dengan rerata masa pupa yaitu 17 jam. Sex ratio imago jantan terhadap betina adalah 1,3:1.

Kata kunci: *Aedes aegypti*, fekunditas, siklus gonotropik, masa larva, masa pupa, sex ratio imago.

ABSTRACT

Background: DHF is a contagious infectious disease caused by dengue virus. The increase in temperature affects the life of rapid breeding vectors, biting rate and reproduction increases, and results in the number of sex ratio imago mosquitoes. Each individual has the ability to produce 50-100 eggs each egg. This study aims to determine fecundity, length of life cycle, and sex ratio of *Aedes aegypti* mosquito in the laboratory using mosquito isolates semarang. **Method:** *Aedes aegypti* mosquito that just came out of pupa sleeve or 1 day old, using 4 mosquito cages with details of 1 mosquito cage consisting of a pair of *Aedes aegypti* mosquitoes male and female. The observations were performed every 8 hours for 28 consecutive days in the laboratory without the use of cooling (AC). The result of the observation was analyzed using univariate test and described each variable. **Result:** Average *Aedes aegypti* mosquitoes lay egg 7 times with total egg total 36 grains / tail / cycle, gonotropic cycle 3-4 days, the average 9-day larval period and the 17-hour pupa period, mean sex ratio imago male 55,5% female 44,5%. **Conclusion:** Average production of *Aedes aegypti* mosquito eggs is 240 grains / tail or 36 eggs / spawning period, frequency of *Ae aegypti* mosquitoes spawn is 7 times, gonotropic cycle 3-4 days. The larval period ranged between 6-13 days with the average larval period of 9 days. The pupa period ranges from 6-20 hours with the average pupa period is 17 hours. Sex ratio of male imago to female is 1.3: 1.

Keywords: *Aedes aegypti*, fecundity, gonotropic cycle, larval period, pupa period, sex ratio imago.