

**PERBEDAAN VARIASI LARUTAN LARVASIDA ALAMI BAWANG
MERAH (*Allium cepa* L.) DENGAN DAUN PEPAYA (*Carica papaya* L.)
TERHADAP MORTALITAS LARVA *Culex sp***

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ABSTRAK

Filariasis adalah penyakit infeksi sistemik kronik yang disebabkan oleh cacing seperti benang, dari genus *Wuchereria bancrofti* dan *Brugia malayi* yang dikenal sebagai filaria yang tinggal di sistem limfa. Nyamuk *Culex* merupakan jenis nyamuk yang menjadi vektor penyakit filariasis yang dapat berkembangbiak di kota maupun di desa. Sampai dengan 2018, dilaporkan 12.677 kasus klinis kronis yang tersebar di 34 provinsi Indonesia. Hal ini dapat terjadi karena angka bebas jentik di Indonesia tahun 2015 sebesar 52,54% yang jauh dari target pemerintah yaitu $\geq 95\%$. Bawang merah dan daun pepaya mengandung bahan kimia aktif berupa *flavonoid*. *Flavonoid* berfungsi sebagai inhibitor pernapasan sehingga dapat menghambat sistem pernapasan pada larva nyamuk. Bawang merah memiliki jumlah kandungan *flavonoid* sebesar 38,2 mg/kg sedangkan daun pepaya sebesar 17,4633 mg/kg.

Jenis penelitian ini adalah *True Experiment* dimana semua variabel pengganggu dapat dikendalikan sehingga tidak merubah hasil. Penelitian ini menggunakan desain *Posttest Only Control Design*. Sempel yang digunakan adalah 750 ekor larva *Culex sp* di Desa Tanjungsari yang diambil lalu diujikan secara *random sampling*.

Hasil penelitian ini adalah diperoleh perbedaan selisih kematian larva *Culex sp* larutan bawang merah dengan daun pepaya pada konsentrasi 7% selisih sebesar 1 kematian larva, konsentrasi 8% selisih sebesar 4 kematian larva, konsentrasi 9% selisih sebesar 2 kematian larva. Dari hasil uji One-Way Anova didapatkan nilai signifikansi $0,000 < \alpha (0,01)$.

Dari hasil analisis penelitian ini menunjukkan adanya perbedaan larutan bawang merah dengan larutan daun pepaya terhadap kematian larva *Culex sp*.

Kata kunci: larva *Culex sp*, larutan bawang merah, larutan daun pepaya

**DIFFERENCES IN VARIATION OF NATURAL LARVICIDAL
SOLUTION OF SHALLOT AND OLD PAPAYA LEAVES AGAINST *Culex*
sp LARVAE MORTALITY**

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ABSTRACT

Filariasis is a chronic systemic infectious disease caused by thread-like worms, of the genus *Wuchereria bancrofti* and *Brugia malayi* known as filaria that live in the lymph system. The *Culex* mosquito is a type of mosquito that is a vector for filariasis which can breed in cities and villages. As of 2018, 12,677 chronic clinical cases were reported across 34 provinces in Indonesia. This can happen because the larva-free rate in Indonesia in 2015 was 52.54% which was far from the government's target of $\geq 95\%$. Shallots and old papaya leaves contain active chemicals, namely flavonoids. Flavonoids function as respiratory inhibitors so that they can inhibit the respiratory system in mosquito larvae. Shallots have a total flavonoid content of 38.2 mg/kg while old papaya leaves are 17.4633 mg/kg.

This type of research is a True Experiment where all confounding variables can be controlled so that they do not change the results. This study uses the Posttest Only Control Design. The sample used was 750 *Culex sp* larvae in Tanjungsari Village which were taken and then tested by random sampling.

The results of this study were obtained differences in the difference in the death of *Culex sp* larvae from shallots solution and papaya leaves at a concentration of 7%, the difference was 1 larval death, at 8% concentration, the difference was 4 larval deaths, at 9% concentration, the difference was 2 larval deaths. From the results of the One-Way Anova test, a significance value of $0.000 < \alpha (0.01)$ was obtained.

From the results of the analysis of this study showed that there were differences in the shallot solution and papaya leaf solution on the death of *Culex sp* larvae.

Keywords: *Culex sp* larvae, shallot solution, old papaya leaf solution