

ABSTRAK

Nurul Fajrin Mustapa. NIM 811411022. Uji Efektifitas Perasan Buah Pinang (*Areca catechu* L.) Sebagai Insektisida Kecoa (*Periplaneta americana*). Skripsi, Jurusan Kesehatan Masyarakat, Fakultas Ilmu-Ilmu Kesehatan dan Keolahragaan, Universitas Negeri Gorontalo. Pembimbing I, Dra. Hj. Rani Hiola, M.Kes. dan Pembimbing II, Hj. Dian Saraswati, S.Pd., M.Kes.

Kecoa merupakan serangga vektor yang memindahkan beberapa mikroorganisme patogen dalam penyebaran penyakit Disentri, Diare, Cholera, Hepatitis A, dan Polio pada anak-anak. Penggunaan insektisida sintetis (kimia) dikenal sangat efektif, tetapi berdampak negatif terhadap lingkungan hidup sehingga sebaiknya digunakan insektisida nabati (alami) buah pinang (*Areca catechu* L.) yang mengandung senyawa *arekolin*, *fenolik*, dan *proantosianidin* dan bersifat mudah terurai serta relatif lebih aman.

Rumusan masalah dalam penelitian yaitu apakah perasan buah pinang efektif digunakan sebagai insektisida kecoa. Penelitian ini bertujuan untuk menguji efektifitas perasan buah pinang sebagai insektisida kecoa dengan masing-masing konsentrasi 50%, 70%, dan 90%.

Metode penelitian menggunakan eksperimen sungguhan dengan pendekatan Rancangan Acak Lengkap. Sampel dalam penelitian sebanyak 96 ekor kecoa dewasa berukuran ± 3 cm. Pengulangan dilakukan sebanyak 3 kali dan diamati setelah 1 x 24 jam. Analisis data dalam penelitian ini menggunakan Uji One Way Anova.

Hasil penelitian menunjukkan pada konsentrasi 50%, 70%, dan 90%, presentase jumlah kematian kecoa berturut-turut adalah 25%, 50%, dan 100%. Hasil analisis data menggunakan Uji One Way Anova menunjukkan nilai F hitung adalah sebesar 45.800 dengan probabilitas sebesar 0.000, karena nilai probabilitas $< \alpha 0.05$ maka H_1 diterima dan H_0 ditolak, sehingga perasan buah pinang (*Areca catechu* L.) efektif digunakan sebagai insektisida kecoa (*Periplaneta americana*). Disarankan kepada masyarakat untuk menggunakan perasan buah pinang (*Areca catechu* L.) sebagai insektisida nabati yang aman bagi kesehatan dan relatif murah dalam membunuh kecoa sebagai pengganti insektisida sintetis yang dapat menyebabkan gangguan kesehatan dan pencemaran lingkungan.

Kata Kunci: Buah Pinang, Insektisida, Kecoa.

ABSTRACT

Nurul Fajrin Mustapa. Student ID. 811411022. Effectiveness Test of the Areca Nut Extract (*Areca catechu L.*) as Cockroach's (*Periplaneta americana*) Insecticide. Skripsi. Department of Public Health, Faculty of Health Sciences and Sports, State University of Gorontalo. The principal supervisor was Dra. Hj. Rani Hiola, M.Kes and Co-supervisor was Hj. Dian Saraswati, S.Pd., M.Kes.

Cockroach is an insect that carries several pathogen microorganisms to spread some diseases such as Dysentery, Diarrhea, Cholera, Hepatitis A, and Polio to the children. The usage of chemical insecticide is known to be effective; however, the impact to the environment is negative thus, it is better to use the natural insecticide such as areca nut extract that contains the arecholyn, phenolic, and proantosianidin and easily degraded as well as relatively safer.

The problem statement in this research was whether the areca nut extract was effective to be used as insecticide for cockroach insect. This research was designed to test the effectiveness of areca nut as cockroach insecticide for each concentrate of 50%, 70%, and 90%.

The method used in this research was real experiment with the complete random design. The samples of this research were 96 adult cockroaches with the size of ± 3 cm. The treatment was repeated three times and was observed for 1 x 24 hours. The data were analyzed using the One Way Anova test.

This research showed that in the concentration of 50%, 70%, and 90%, the percentage of the cockroach death was 25%, 50%, and 100%. The One Way Anova test analysis showed that the F count was 45.800 with the probability of 0.000, due the probability was $< \alpha 0.05$ then the H_1 was accepted and the H_0 was rejected, thus the areca nut extract was effective to be used as insecticide for cockroach. It is recommended to the community to use the extract of areca nut as natural insecticide that are safer for the health and relatively cheaper to curb the spread of the cockroach as the substitute for the chemical insecticide which could cause the health problems and environmental pollution.

Keywords : Areca Nut, Insecticide, Cockroach.

