

KAJIAN PEMANFAATAN DAUN BELIMBING WULUH (*Averrhoa bilimbi*) DAN DAUN TEMBELEKAN (*Lantana Camara*) SEBAGAI INSEKTISIDA NABATI TERHADAP *Sitophilus zeamais* PADA BENIH JAGUNG DALAM SIMPANAN

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ABSTRAK

Sitophilus zeamais dikenal sebagai hama bubuk jagung atau *corn weevil* dan merupakan hama primer di gudang penyimpanan. Untuk meminimalkan penggunaan insektisida kimia perlu alternatif pengendalian pengganti yang efektif dan aman terhadap lingkungan salah satunya menggunakan insektisida nabati. Daun belimbing wuluh (*Averrhoa bilimbi*) dan daun tembelean (*Lantana camara*) memiliki zat aktif yang berpotensi dapat mengendalikan *S. zeamais*. Tujuan penelitian ini adalah mengetahui pengaruh ekstrak daun belimbing wuluh dan ekstrak daun tembelean terhadap populasi *S. zeamais* dan kualitas benih jagung dalam simpanan serta mendapatkan konsentrasi ekstrak daun belimbing wuluh dan daun tembelean yang paling baik dalam menekan populasi *S. zeamais* dan mempertahankan kualitas benih jagung dalam simpanan. Penelitian dilakukan di Laboratorium Proteksi Tanaman Fakultas Pertanian UPN “Veteran” Yogyakarta pada bulan Januari hingga Juli 2021. Percobaan menggunakan Rancangan Acak Lengkap (RAL) dengan 3 ulangan yang terdiri atas 7 perlakuan yaitu : kontrol tanpa perlakuan (K), ekstrak daun belimbing wuluh konsentrasi 3% (B1), 6% (B2), 9% (B3), ekstrak daun tembelean konsentrasi 3% (T1), 6% (T2) dan 9% (T3). Parameter pengamatan pada penelitian ini adalah mortalitas *S. zeamais*, jumlah populasi, persentase kehilangan bobot, kadar air benih, daya hantar listrik, daya kecambah, indeks vigor, bobot segar bibit dan bobot kering bibit. Data hasil penelitian dianalisis menggunakan sidik ragam atau *Analysis of Variance* (ANOVA) pada taraf 5%. Hasil penelitian menunjukkan B3 dan T3 dapat menjaga kualitas benih pada parameter kadar air benih dan indeks vigor. Konsentrasi ekstrak daun belimbing wuluh dan daun tembelean paling baik dalam menekan *S. zeamais* pada konsentrasi 9%.

Kata kunci : *Sitophilus zeamais*, *Averrhoa bilimbi*, *Lantana camara*, Benih Jagung

**STUDY OF UTILIZATION LEAVES OF WULUH STAR (*Averrhoa bilimbi*)
AND LEAVES OF TEMBELEKAN (*Lantana Camara*) AS VEGETABLE
INSECTICIDES AGAINST *Sitophilus zeamais* IN CORN SEEDS IN STORE**

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ABSTRACT

Sitophilus zeamais is known as corn powder pest or corn weevil and is a primary pest in warehouses. To minimize the use of chemical insecticides, it is necessary to use an alternative control that is effective and safe for the environment, one of which is using vegetable insecticides. The wuluh starfruit leaves (*Averrhoa bilimbi*) and tembelekan leaves (*Lantana camara*) have active substances that have the potential to control *S. zeamais* pests. The purpose of this study was to determine the effect of starfruit leaf extract and tembelekan leaf extract on the population of *S. zeamais* and corn seed quality in storage and to obtain the best concentration of starfruit leaf extract and tembelekan leaf extract in suppressing the population of *S. zeamais* and maintaining the quality of corn seed in storage. savings. The study was conducted at the Plant Protection Laboratory of the Faculty of Agriculture UPN "Veteran" Yogyakarta from January to July 2021. The experiment used a completely randomized design (CRD) with 3 replications consisting of 7 treatments, namely: control without treatment (K), starfruit leaf extract concentration 3% (B1), 6% (B2), 9% (B3), tembelekan leaf extract concentrations of 3% (T1), 6% (T2) and 9% (T3). Parameters observed in this study were mortality of *S. zeamais*, population size, percentage of weight loss, seed moisture content, electrical conductivity, germination, vigor index, seedling fresh weight and seed dry weight. The research data were analyzed using Analysis of Variance (ANOVA) at the 5% level. The results showed that B3 and T3 could maintain seed quality on the parameters of seed moisture content and vigor index. The concentration of extracts of star fruit wuluh and tembelek leaves were the best in suppressing *S. zeamais* pests at a concentration of 9%.

Key words : *Sitophilus zeamais*, *Averrhoa bilimbi*, *Lantana camara*, Corn Seed