

**BIOAKTIVITAS FORMULASI CNSL SEBAGAI INSEKTISIDA *SEED*  
TREATMENT TERHADAP *SITOPHILUS ZEAMAI*S DAN  
MUTU BENIH JAGUNG**

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**INTISARI**

Jagung merupakan salah satu komoditas pangan penting yang rentan terhadap serangan *Sitophilus zeamais* selama penyimpanan. Kerusakan akibat serangan hama ini bisa mencapai 100%, untuk itu diperlukan pengendalian. Ekstrak Kulit Biji Mete atau sering disebut CNSL (*Chasew Nut Shell Liquid*) merupakan bahan nabati yang memiliki potensi sebagai biopestisida untuk mengendalikan hama *Sitophilus zeamais*. Penelitian ini bertujuan untuk mengetahui efektivitas dan konsentrasi formulasi CNSL terbaik untuk mengendalikan hama *S. zeamais* dan mempertahankan mutu benih jagung dalam penyimpanan. Penelitian ini telah dilaksanakan pada bulan Agustus sampai Oktober 2018 di Laboratorium Agronomi, Fakultas Agroindustri, Universitas Mercu Buana Yogyakarta. Penelitian ini merupakan faktor tunggal yang disusun dalam rancangan acak lengkap (RAL) dengan empat ulangan. Perlakuan merupakan kombinasi konsentrasi formulasi CNSL dengan penambahan pewarna alami daun pandan suji dan daun jati. Kombinasi perlakuan terdiri atas tujuh perlakuan yaitu konsentrasi formulasi CNSL 0% + daun suji, 0% + daun jati, 10% + daun suji, 10% + daun jati, 20% + daun suji, 20% + daun jati dan tanpa pemberian apapun sebagai kontrol. Hasil penelitian menunjukkan bahwa : CNSL sebagai biopestisida nabati mampu memberikan mortalitas dan menekan populasi *S. zeamais* dan mempertahankan mutu benih jagung selama penyimpanan 12 minggu. Perlakuan dengan konsentrasi formulasi CNSL 20% dan penambahan pewarna alami baik daun suji maupun daun jati dapat menyebabkan mortalitas serta menekan populasi lebih besar dan menjaga mutu benih lebih baik daripada konsentrasi formulasi CNSL 10 dan 0 %.

Kata kunci : benih jagung, *S. zeamais*, CNSL, *seedtreatment*

**BIOACTIVITY OF CNSL FORMULATION AS SEED TREATMENT  
INSECTICIDE ON *SITOPHILUS ZEAMAI*S AND  
QUALITY OF CORN SEED**

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**ABSTRACT**

Corn is one of the important food commodities that is vulnerable to attacks of *Sitophilus zeamais* during in storage. Damage due to pest attacks of corn seed could reach 100%, and for this reason, the control of it is needed. *Cashew Nut Shell Liquid* (CNSL) is a botanical material that has potential as a biopesticide to control *S. zeamais*. This study was aimed to determine the effectiveness and the best concentration of CNSL formulation to control *S. zeamais* and maintain the quality of corn seeds in storage. This research had been conducted from August to October 2018 at the Agronomy Laboratory, Faculty of Agroindustry, Yogyakarta Mercu Buana University. This study was a single factor experiment with seven treatments and four replications which were arranged in a completely randomized design (CRD). The treatments were combine of concentration of formulation CNSL and natural dyes which were consisted of 0% - “suji”, 0% - teak, 10% - “suji”, 10% - teak, 20% - “suji”, 20% - teak, and without insecticide application as control. The results of the research showed that : CNSL formulation as a botanical pesticide was able to increas the mortality and suppress the population of *S. zeamais* and also could maintain the quality of corn seeds after 12 weeks in storage. Treatments with CNSL formulation 20% with both natural dyes suji and teak leaves could give mortality, suppress the pest population and maintain the corn seed quality better than concentration at 10 and 0 %.

Keywords: corn seed, *S. zeamais*, CNSL, seedtreatment.