

**EFEKTIVITAS TIGA JENIS TEPUNG *INERT* TERHADAP
MORTALITAS DAN PERKEMBANGAN KUMBANG JAGUNG (*Sitophilus
zeamais* Motschulsky) PADA BENIH JAGUNG MANIS DALAM
SIMPANAN**

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ABSTRAK

Tepung *Inert* merupakan bahan sangat halus yang terbentuk dari sisa-sisa pembakaran suatu bahan. Tepung *Inert* memiliki kemampuan untuk mengendalikan hama kumbang jagung(*S. Zeamais*). Bahan tersebut diuji untuk diketahui toksisitasnya terhadap hama kumbang jagung(*S. Zeamais*). Penelitian ini dilakukan untuk menguji pengaruh Tepung *Inert* terhadap mortalitas pada hama *S. zeamais* dalam simpanan. Toksisitas diuji dengan metode pemberian tiga jenis bahan Tepung *Inert* berupa abu sekam padi (*rice husk ash*), abu kayu (*wood ash*), dan abu daun bambu (*leaf bamboo powder*). Perlakuan diuji dengan konsentrasi 0,3 g/ 0,6 g/ 0,9 g per 100g benih, serta tanpa perlakuan atau kontrol dengan masa simpan benih 30 hari dan 60 hari. Parameter yang diamati adalah persentase mortalitas hama, populasi imago, susut benih, kadar air benih, daya kecambah, indeks vigor, dan konsentrasi zat terlarut. Data dianalisis menggunakan uji analisis varians (ANOVA) dan dilanjutkan dengan uji kontras Ortogonal pada taraf 5%. Hipotesa awal menunjukkan hasil terbaik tepung *inert* abu sekam padi 0,6g/100g benih. Pemberian tepung *inert* mampu meningkatkan mortalitas dan menurunkan perkembangan hama *S.zeamais* dibandingkan tanpa perlakuan. Tepung *inert* abu sekam padi dengan dosis 0,3g;0,6g;0,9g tidak beda nyata namun terbukti dalam meningkatkan mortalitas dan menurunkan perkembangan hama *S. zeamais* dalam simpanan.

Kata Kunci: Abu sekam padi, Dosis 0,6gr/100gr, dan Masa simpan

**EFFECTIVENESS OF THREE TYPES OF INERT POWDERS ON THE
MORTALITY AND DEVELOPMENT OF MAIZE WEEVIL (*Sitophilus
zeamais* Motschulsky) IN STORED SWEET CORN SEEDS**

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ABSTRACT

Inert dust is a very fine material formed from the combustion residues of a substance. It has the ability to control the maize weevil (*Sitophilus zeamais*). That's specific toxicity tested against the *S.zeamais*. This study was conducted to examine the effect of inert dusts on the mortality of *S. zeamais* during storage. Toxicity was evaluated by applying three types of inert dust: rice husk ash, wood ash, and bamboo leaf powder. The treatments were tested at concentrations of 0.3 g, 0.6 g, and 0.9 g per 100 g of seeds, alongside an untreated control, over storage periods of 30 and 60 days. The observed parameters included pest mortality percentage, imago population, seed weight loss, seed moisture content, germination rate, vigor index, and solute concentration. The data were analyzed using Analysis of Variance (ANOVA), followed by an Orthogonal Contrast test at a 5% significance level. The initial hypothesis suggested that rice husk ash at 0.6 g per 100 g of seeds would yield the best results. The application of inert dust was able to increase the mortality and reduce the development of *S. zeamais* compared to the untreated control. Rice husk ash at a dose of 0,3g;0,6g;0,9g not significantly different but proved to be the most effective treatment in increasing mortality and suppressing the development of *S. zeamais* during storage.

Keywords: Rice Husk Ash, Dosage 0.6gr/100gr, and Shelf Life