

**PENGARUH PENAMBAHAN *SLUDGE* BIOGAS KOTORAN AYAM
SEBAGAI BAHAN SUBSTITUSI DEDAK PADA MEDIA JAMUR
TERHADAP KUALITAS JAMUR TIRAM PUTIH
(*Pleurotus florida*)**

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan *sludge* biogas ekskreta ayam sebagai bahan substitusi dedak pada media jamur tiram putih serta produktivitas jamur tiram putih yang dihasilkan. *Sludge* biogas ekskreta ayam dikeringkan di bawah sinar matahari sampai berbentuk menyerupai tanah. Selanjutnya dibagi menjadi 5 perlakuan dengan komposisi P₀ media tanpa penambahan *sludge* biogas ekskreta ayam, P₁ media dengan penambahan *sludge* biogas ekskreta ayam (3,75%), P₂ (7,5%), P₃ (11,25%), dan P₄ (15%). Selanjutnya P₀, P₁, P₂, P₃ dan P₄ dicampurkan ke dalam bahan penyusun media jamur dengan kontrol media jamur komersial (dedak 15%) dan dilakukan sebanyak 3 ulangan. Masing-masing perlakuan media, *sludge* biogas ekskreta ayam dan jamur yang dihasilkan diuji kandungan kimianya meliputi kadar air, bahan organik, serat kasar, C-organik, N-total, P-total, K-total, rasio C/N dan uji mikrobiologis. Parameter yang diamati antara lain mulai umur panen, berat segar, jumlah tudung, panjang tangkai dan diameter tudung. Data diuji menggunakan analisis variansi acak lengkap pola searah dan perbedaan rata-rata diuji menggunakan *Duncan's Multiple Range Test* (DMRT). Hasil uji kimia yang dilakukan menunjukkan bahwa kualitas media yang paling baik pada substitusi dedak dengan *sludge* biogas ekskreta ayam 15% (P₄) dengan kandungan kadar serat kasar, kadar C-organik, kadar P dan kadar K secara berturut-turut yaitu 15,14%, 49,1%, 0,54%, 77,56%, 1,42%, dan 0,94%. Uji parameter biologi yang dilakukan meliputi umur mulai panen, berat segar, panjang tangkai, diameter tudung, dan jumlah tudung yang paling baik adalah pada perlakuan P₂ (dedak 50% dan *sludge* 50%) karena dapat meningkatkan berat segar jamur dengan berat sebesar 195,63 g. Dapat disimpulkan bahwa dedak dapat diganti dengan *sludge* biogas ekskreta ayam sebesar 50% dalam media jamur tiram putih.

(Kata Kunci : Jamur Tiram Putih, Media Jamur Tiram Putih, *Sludge* Biogas Ekskreta Ayam)

EFFECT OF ADDITION OF *SLUDGE* BIOGAS AS WASTE MATERIAL SUBSTITUTION BRAN CHICKEN ON THE QUALITY OF MUSHROOM MEDIA WHITE OYSTER MUSHROOM (*Pleurotus florida*)

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ABSTRACT

The aim of this research was to determine the effect of chicken excreta *sludge* biogas as a substitute material bran on the media and the productivity of white oyster mushroom oyster mushroom produced. Chicken excreta biogas *sludge* is dried in the sun until shaped like soil. Further divided into 5 treatment with the composition P₀ biogas *sludge* media without the addition of chicken excreta, P₁ media with the addition of chicken excreta biogas *sludge* (3,75%), P₂ (7,5%), P₃ (11,25%) and P₄ (15%). Furthermore P₀, P₁, P₂, P₃ and P₄ is mixed into the building blocks of mushroom media with media control of commercial mushroom (bran 15%) and performed a total of three replications. Each treatment media, *sludge* biogas excreta, chicken and mushrooms produced is tested chemical content include water content, organic matter, crude fiber, C-organic, total-N, P-total, K-total ratio C/N and microbiological testing. The observed parameters include start harvesting, fresh weight, number of hoods, stem length and diameter of the hood. Data were tested using analysis of variance completely randomized unidirectional and the average difference was tested using *Duncan's Multiple Range Test* (DMRT). The results of the chemical tests carried out showed that the quality of the best media in substitution bran with biogas *sludge* chicken excreta 15% (P₄) with the content of crude fiber, organic-C levels, the levels of P and K levels respectively is 15,14% , 49,1%, 0,54%, 77,56%, 1,42% and 0,94%. Test conducted biological parameters such as age began to harvest, fresh weight, stem length, diameter hood, and the hood of the most good number are in treatment P₂ (bran 50% and 50% *sludge*) because it can increase the fresh weight of mushrooms with a weight of 195,63 g. It can be concluded that the bran can be replaced with chicken excreta biogas *sludge* by 50% in the medium white oyster mushroom.

(Key Words : White Oyster Mushroom, Oyster Mushroom Media, Chicken Manure Biogas Sludge)