

PENGARUH PENGGUNAAN *SLUDGE* BIOGAS KOTORAN AYAM DENGAN PENAMBAHAN TEPUNG BEKICOT (*Achatina fulica*) PADA MEDIA JAMUR TERHADAP PRODUKSI JAMUR TIRAM PUTIH (*Pleurotus florida*)

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan tepung bekicot pada *sludge* biogas kotoran ayam dalam media jamur (*baglog*) serta peningkatan produktivitas jamur tiram putih (*pleurotus florida*) yang dihasilkan. *Sludge* biogas kotoran ayam yang telah diambil dalam bak penampungan kemudian dikeringkan dibawah cahaya sinar matahari. Penelitian ini dibagi menjadi empat bagian, yaitu P₀, P₁, P₂, P₃ dan setiap perlakuan terdiri dari 3 ulangan. Kontrol (P₀) adalah perlakuan dengan menggunakan dedak sebagai bahan budidaya jamur tiram putih, P₁ tepung bekicot (1%); P₂ tepung bekicot sebanyak (3%), sedangkan P₃ tepung bekicot (5%). Masing-masing perlakuan diuji kimia (kadar air, serat kasar, bahan organik, C-organik, N-total, P-total, K-total, dan C/N rasio). Jumlah mikrobia yang terkandung di dalam media jamur tiram putih diuji dengan uji mikrobiologi. Variabel produktivitas jamur tiram putih meliputi umur panen, berat segar, jumlah tudung, panjang tangkai, diameter tudung jamur. Data dianalisis statistik menggunakan Rancangan Acak Lengkap (RAL) pola searah dan dilanjutkan dengan *Duncan's new Multiple Range Test* (DMRT) untuk data yang berbeda nyata. Hasil penelitian menunjukkan bahwa *sludge* biogas kotoran ayam dan tepung bekicot 5% (P₃) dapat meningkatkan (P<0,01) nutrisi dalam media tanam jamur tiram putih, seperti kadar air 60,76%; bahan organik 33,10%; C-total 19,22% dan N total 3,13%; serta dapat meningkatkan jumlah koloni mikrobia dalam media tanam sebesar $1,4 \times 10^9$. Penambahan tepung bekicot (1%) pada *sludge* biogas kotoran ayam mampu meningkatkan jumlah tangkai jamur tiram sebesar 6,56%. Dapat disimpulkan bahwa tepung bekicot pada *sludge* kotoran ayam berpotensi sebagai bahan pengganti dedak serta meningkatkan nutrisi dalam media jamur dan produksi jamur tiram putih.

(Kata kunci: *sludge* biogas kotoran ayam, tepung bekicot dan media tanam jamur tiram putih)

THE EFFECT OF THE ADDITION SNAIL (*Achatina fulica*) FLOUR ON THE CHICKEN MANURE BIOGAS SLUDGE IN MUSHROOM MEDIA OF WHITE OYSTER MUSHROOM (*Pleurotus florida*) Production

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Abstract

This research was aimed to the addition snail (*A. fulica*) flour on the chicken manure biogas *sludge* in mushroom media (*baglog*) and increased of white oyster mushroom (*Pleurotus florida*) productivity. Chicken manure biogas *sludge* has been taken into biogas tube, then dried under the sunlight. This research was divided into four parts: P₀, P₁, P₂, P₃ and each treatment consist of 3 replications. Bran has used for control (P₀) as mushroom culture media; P₁ of snail flour (1%); P₂ of snail flour (3%); while P₃ of snail flour (5%). Each treatment was tested with chemical analysis (water content, crude fiber, organic material, C-organic, N-matter, P-matter, K-matter, and the C/N ratio). The number of microbes that contained in oyster mushroom media tested with the microbiological test. The variables of white oyster mushroom productivity such as harvesting period, fresh weight per champignon, number umbrella per cluster, stalk length and diameter of umbrella mushroom. The data obtained were statistically analyzed using one-way Complete Randomized Design (CRD) and followed subsequently by Duncan's New Multiple Range Test (DMRT). The results showed that the addition of snail flour (5%) on the chicken manure biogas *sludge* (P₃) was increased (P <0,01) nutrient in white oyster mushroom media (water content 60,76%; organic matter 30,10%; C-matter 19,22% and N-matter 3,13%; and the number of microbes colony 1,4 x 10⁹). The addition of snail flour (1%) on the chicken manure biogas *sludge* was able to accelerate increased the number of oyster mushroom stalks 6,56%. It can be concluded that an addition snail flour on the chicken manure biogas *sludge* be potentially used as substitute bran and increased nutrients in mushroom media of white oyster mushroom production.

(Keywords: chicken manure biogas *sludge*, snail flour and white oyster mushroom media)