PENGARUH KOMPOSISI CAMPURAN SERBUK KAYU FLAMBOYAN (Delonix regia) DAN KAYU SENGON (Falcataria
moluccana) SERTA PERSENTASE NUTRISI TERHADAP PERTUMBUHAN JAMUR TIRAM (Pleurotus ostreatus)
Leonita Putri Gylaldien, Prof. Ir. Denny Irawati, S.Hut, M.Si, Ph.D., IPM.
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# PENGARUH KOMPOSISI CAMPURAN SERBUK KAYU FLAMBOYAN (*Delonix regia*) DAN KAYU SENGON (*Falcataria moluccana*) SERTA PERSENTASE NUTRISI TERHADAP PERTUMBUHAN JAMUR TIRAM (*Pleurotus ostreatus*)

Leonita Putri Gylaldien[1], Denny Irawati[2]

## INTISARI

Jamur tiram (*Pleurotus ostreatus*) merupakan salah satu komoditas jamur konsumsi bernilai ekonomi dan bergizi tinggi, sehingga potensial untuk dikembangkan. Media tanam yang umum digunakan dalam budidaya jamur tiram adalah serbuk kayu sengon, tetapi ketersediaannya mulai terbatas karena dimanfaatkan untuk berbagai keperluan lain. Oleh karena itu, diperlukan alternatif media tanam, salah satunya serbuk kayu flamboyan yang berpotensi sebagai sumber lignoselulosa. Selain jenis serbuk kayu, penambahan bekatul sebagai nutrisi juga penting dalam mendukung pertumbuhan jamur. Penelitian ini bertujuan untuk menganalisis interaksi komposisi campuran serbuk kayu flamboyan dan sengon serta persentase nutrisi terhadap pertumbuhan jamur tiram, serta menentukan komposisi media yang optimal.

Penelitian ini menggunakan rancangan acak lengkap faktorial dengan dua faktor, yaitu komposisi campuran serbuk kayu (sengon 100%, sengon 50% flamboyan 50%, dan flamboyan 100%) dan persentase nutrisi (5%, 15%, dan 25%) sebanyak 5 kali ulangan. Parameter yang diamati meliputi periode panen, berat basah jamur, berat kering jamur, kadar air jamur, dan *biological conversion*.

Hasil penelitian menunjukkan bahwa faktor komposisi campuran serbuk kayu dan interaksi antara kedua faktor tidak berpengaruh nyata terhadap seluruh parameter yang diamati, sehingga serbuk kayu flamboyan berpotensi digunakan sebagai substrat alternatif pengganti serbuk kayu sengon. Sementara itu, faktor persentase nutrisi berpengaruh nyata terhadap berat basah, berat kering, dan *biological conversion* jamur tiram. Perlakuan nutrisi 15% dinilai sebagai perlakuan terbaik dan lebih efisien karena tidak berbeda nyata dengan perlakuan 25%, tetapi telah mampu meningkatkan pertumbuhan dan produktivitas jamur tiram. Berdasarkan nilai *biological conversion*, kombinasi perlakuan sengon 100% dengan penambahan nutrisi 15% merupakan perlakuan terbaik, dengan hasil sebesar 12,47%.

Kata Kunci: Substrat Alternatif, Bekatul, Baglog, Produktivitas, *Biological Conversion*

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# THE EFFECT OF FLAMBOYANT (*Delonix regia*) AND SENGON (*Falcataria moluccana*) SAWDUST COMPOSITION AND NUTRIENT PERCENTAGE ON THE GROWTH OF OYSTER MUSHROOM (*Pleurotus ostreatus*)

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## *ABSTRACT*

Oyster mushroom (*Pleurotus ostreatus*) is an edible mushroom commodity with high economic value and nutritional content, making it potential for further development. The commonly used growing medium for oyster mushroom cultivation is sengon sawdust. However, its availability has become increasingly limited due to its use for various other purposes. Therefore, an alternative growing medium is needed, one of which is flamboyant sawdust, which has potential as a lignocellulosic source. In addition to the type of sawdust, the addition of rice bran as a nutrient source is also important in supporting mushroom growth. This study aimed to analyze the interaction between the composition of flamboyant and sengon sawdust and nutrient percentage on the growth of oyster mushroom, as well as to determine the optimal medium composition.

This study used a factorial completely randomized design with two factors, namely sawdust composition (100% sengon, 50% sengon + 50% flamboyant, and 100% flamboyant) and nutrient percentage (5%, 15%, and 25%), with five replications. The observed parameters included harvest period, fresh and dry weight of mushroom, moisture content of mushroom, and biological conversion.

The results showed that sawdust composition and the interaction between the two factors had no significant effect on all observed parameters, indicating that flamboyan sawdust has potential as an alternative substrate to replace sengon sawdust. Meanwhile, nutrient percentage significantly affected fresh and dry weight of mushroom, and biological conversion. The 15% nutrient treatment was considered the best and more efficient treatment because it was not significantly different from the 25% treatment, but was able to improve the growth and productivity of oyster mushroom. Based on the biological conversion value, the combination of 100% sengon sawdust with 15% nutrient addition was the best treatment, with a result of 12.47%.

*Keywords*: *Alternative Substrate, Rice Bran, Baglog, Productivity, Biological Conversion*

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