

## **ABSTRAK**

### **PENGARUH LAMA PENGOMPOSAN TANDAN KOSONG KELAPA SAWIT DENGAN *TRICHODERMA* DAN PENAMBAHAN PUPUK/NUTRISI TERHADAP KARAKTERISTIK MEDIA TUMBUH DAN PRODUKTIVITAS JAMUR MERANG (*Volvariella volvaceae*)**

**Oleh**

**Ilham Bintang**

Penelitian ini bertujuan untuk mengetahui pengaruh lama pengomposan TKKS (tandan kosong kelapa sawit) yang dengan *Trichoderma* dan penambahan pupuk/nutrisi terhadap produktivitas jamur merang. Alat yang digunakan dalam penelitian ini adalah ember, timbangan, jangka sorong, kumbung jamur merang, gelas ukur, kotak papan kayu, timbangan digital, sedangkan bahan yang digunakan dalam penelitian ini adalah bibit jamur merang, limbah TKKS, dedak, kapur pertanian, pupuk anorganik, *trichoderma* dan *mikronutrient*.

Penelitian ini dilaksanakan pada bulan Februari – Mei 2019 di Laboratorium Lapang Terpadu dan Laboratorium Rekayasa Sumber Daya Air dan Lahan, Jurusan Teknik Pertanian, Fakultas Pertanian, Universitas Lampung. Metode yang digunakan dalam penelitian ini adalah rancangan acak lengkap faktorial. Penelitian ini terdiri dari dua faktor yaitu faktor pertama (P) adalah lama

pengomposan TKKS yang terdiri dari 2 taraf yaitu pengomposan selama 8 hari dan 30 hari. Faktor kedua (T) yang terdiri dari 5 taraf yaitu pupuk NPK dosis 3 gr, pupuk NPK dosis 100 gr, pupuk *mikronutrient*, pupuk NPK dosis 3 gr + mikronutrien, dan pupuk NPK dosis 100 gr + mikronutrien. Masing-masing perlakuan mengalami pengulangan (U) sebanyak 3 kali sehingga didapat 30 unit percobaan.

Hasil penelitian menunjukkan bahwa interaksi lama pengomposan TKKS dengan *trichoderma* dan pupuk/nutrisi tidak berpengaruh nyata terhadap semua parameter yang diamati ( $p > 0,05$ ) kecuali pada diameter tubuh buah jamur dan lama periode panen. Produktivitas jamur merang tertinggi dalam penelitian ini terdapat pada perlakuan lama pengomposan 8 hari dan penambahan pupuk NPK dosis 3 gr + *mikronutrient* dengan berat total jamur merang yang dihasilkan 2838,66 g/m<sup>2</sup>. dan nilai efisiensi biologi 8,32% %. Perubahan karakteristik media tumbuh TKKS tertinggi juga terdapat pada faktor lama pengomposan 8 hari dan penambahan pupuk NPK dosis 3 gr + mikronutrien.

Kata Kunci : lama pengomposan, *trichoderma*, penambahan pupuk, TKKS, produktivitas jamur merang, karakteristik kimia

## **ABSTRACT**

### **THE EFFECT OF COMPOSTING DURATION PALM OIL EMPTY BUNCHES WITH TRICHODERMA AND ADDITION OF FERTILIZER / NUTRITION ON THE CHARACTERISTICS OF GROW MEDIA AND PRODUCTIVITY OF PADDY STRAW MUSHROOM (*Volvariella volvaceae*)**

**By**

**Ilham Bintang**

This research aims to determine the effect of the composting duration of OPEFB (oil palm empty fruit bunches) with Trichoderma and the addition of fertilizers / nutrients on the productivity of paddy straw mushrooms. The tools used in this research were buckets, scales, calipers, kumbung of paddy straw mushrooms, measuring cylinders, wooden board boxes, digital scales, while the materials used in this research were seedlings of mushroom, the waste of OPEFB, rice bran, agricultural lime, inorganic fertilizers, trichoderma and micronutrients.

This research was conducted in February - May 2019 in the Integrated Field Laboratory and Laboratory of Water and Land Resources Engineering, Department of Agricultural Engineering, Faculty of Agriculture, Lampung University. The method used in this research was completely randomized

design with factorial arrangement. This research consists of two factors, the first factor (P) is the duration of composting of OPEFB which consisted of 2 levels specifically composting for 8 days and 30 days. The second factor (T) consisted of 5 levels, specifically NPK fertilizer dosage 3 gr, NPK dosages of 100 gr, micronutrients, NPK doses of 3 gr + micronutrients, and NPK doses of 100 gr + micronutrients. Each treatment has 3 replicates resulting in 30 experimental units.

The results showed that the interaction of the OPEFB composting duration with trichoderma and the addition of fertilizer / nutrition did not significantly affect all observed parameters ( $p > 0.05$ ) except for the diameter of the mushroom body and the length of the harvest period. The highest productivity of paddy straw mushrooms in this research was found in the treatment of 8 days of composting duration and the addition of NPK fertilizer dose of 3 gr + micronutrient with the total weight of the paddy straw mushroom produced 2838.66 g / m<sup>2</sup>. and biological efficiency value of 8.32%. Changes in the media characteristics of the highest growth of OPEBS were also found in the composting duration for 8 days and the addition of NPK fertilizer at a dose of 3 gr + micronutrients.

**Keywords:** duration of composting, trichoderma, addition of fertilizer, OPEBS, productivity of paddy straw mushroom, chemical characteristics