

ABSTRACT

Hariyanti, 2014. **The Influence of Addition of Organic Materials on Growing Media Composition of F3 on Grey Oyster Mushroom (*Pleurotus sajor-caju*) Growth and Development.** Thesis. Biology Department, Science and Technology Faculty, Maulana Malik Ibrahim State Islamic University of Malang. Supervisor : Dr. H. Eko Budi Minarno, M.Pd, Andik Wijayanto M, Si, Ir. Wigati Istuti.

Keywords : Planting Media, Grey Oyster Mushroom (*Pleurotus sajor-caju*).

Grey Oyster Mushroom (*Pleurotus sajor-caju*) is kind of mushroom that has flavors testy and has function for medicine. Mushroom production that's still undeveloped is one of the causes in low production of grey oyster mushroom that produced by farmers. It is caused plant media substrate relatively same every time. Therefore, as an alternative, then do the addition of material on composition of growing media by using *Eichornia crassipes*, *Coconut fibre* and straw of rice (*Oryza sativa*), in hopes, it can minimalize the used of wood sawdust that decreasingly in number and can also increase the production of mushrooms. The three types of planting media have benefits of replacing wood sawdust that decreasingly in number and basic media that more expensive relatively. This research aims to know the influence of addition of organic materials in growing media composition of f3 on the growth and development of grey oyster mushroom (*Pleurotus sajor-caju*).

The research was conducted at the home of mushrooms, Hall of Agricultural Technology Study, East Java, Karang-Ploso, Malang in February-June 2014. The material used are seed of oyster mushroom gray, CaCO_3 , rice bran, brown sugar, biodecomposer, *coconut fibre*, rice straw, *Eichornia crassipes*, and water. This research used *completely randomized design* (CRD) in two factors. The first factor is the type of plant media that includes *coconut fibre* (C1), rice Straw (C2) and *Eichornia crassipes* (C3). The second factor is concentration of plant media mixture that includes; concentration of 0% / control (P0), 5% (P1), 10% (P2), 15% (P3), 20% (P4). Data that obtained from this study are analyzed by the *analysis of varians* (Anova) of two lines. To find out the best treatment combination continued with UJD (Test Distance Duncan) with 5% significance level.

The results of this research show that there are influences of planting media types that added with different concentration on the growth and development of grey oyster mushroom (*Pleurotus sajor-caju*). The fastest of mycelium Growth (HSI) was obtained by the adding material on planting media of *Eichornia crassipes* 10%, while the appearing of *pinhead* (HSI) fruit stem number (fruit), length of fruit stalk (cm) and harvest interval (days) are best obtained on treatment control. The best wet weight (g) was obtained by administering *coconut fibre* to 10%. In another case, the adding of three materials has no effect on the yeast hood diameter (cm). Based on results of this research are advised to use cocnut fibre in concentration of 10% as an additional alternative on planting media composition of grey oyster mushroom.