

## ABSTRACT

Ahmad, Subada. 2014. **The Influence of Corncab Starch Concentrations and Old Composting of Grow Media F3 on Growth Black Auricularia Mushroom (*Auricularia polytricha*) Stem.** Thesis. Biology Department, Science and Technology Faculty, Maulana Malik Ibrahim State Islamic University of Malang. Supervisor: (I) Dr. H. Eko Budi Minarno, M.Pd. (II) Andik Wijayanto M.Si (III): Ir. Wigati Istuti.

**Keywords:** Black Auricularia Mushroom (*Auricularia polytricha*), old composting, Corncab Starch, Grow Media Composition.

Corncab is the agricultural waste that during the time less varied inutilizing. Nutrients in corncabs is 80.82% carbohydrate, 2.12% protein, 41% cellulose, 36% hemicellulose. Based on nutrients highest contained in corncab, it need to be harnessed as carbohydrates source for growth of Black Auricularia Mushroom by composting in advance. Composting is weathering of organic materials into anorganic materials by fermentation ways. The purposes of this research is knowing the influence of corncab starch concentration and long composting on growing media against growth *Auricularia polytricha* mushroom stem.

The research was conducted at the home of mushrooms, Hall of Agricultural Technology Study, East Java. Research was implemented in Februari – June 2014. This research used materials as auricularia mushroom seeds, corncabs starch, bran, CaCO<sub>3</sub>, brown sugar, biodecomposer, and water. Research used *completely randomized design (CRD)* in two factors. Ran. The first factor is long composting include 2 days composting (L1), 4 days composting (L2), and 6 days composting (L3). The second factor is concentration treatment of corncab starch include; 0%/ kontrol (P0), 5% (P1), 10% (P2), 15% (P3), 20% (P4) concentrations.

The results of research showed that (1) there is influence of concentration of corncab starch on mycelium growth and *Auricularia polytricha* stem. Concentration of (P1) 5%, (P2) 10%, and (P4) 20% gave the best influence on *Auricularia polytricha* mushroom stem growth. (2) 4 days composting (L2) gave the best influence on *Auricularia polytricha* mushroom stem growth. (3) there were interactions between long influence of composting with concentration of corncab starch that different for grow media on mycelium growth and *Auricularia polytricha* mushroom stem. L2P4 treatment (4 days composting + 20% concentration) gave the best effect on mycelium growth parameters (21 HSI) and appearing *pinhead* 32 (HSI). L2P2 treatment (4 days composting + 10% concentration) gave the best effect on fresh weight (52,1 g), dry weight (9.48 g), and the number of fruit stem (9.3 g). L2P1 treatment (4 day composting + 5% concentration) gave the best effect on fruit stem diameter (8,7 cm) and harvest interval (4,85 days ). L2P1 treatment is recommended as reference in the production of black *Auricularia polytricha* mushroom, when harvest interval distance faster, business growth will be faster also.