

## ABSTRACT

Mushrooms are now widely used as a food ingredient. The use of EM-4 to the mushroom planting media and providing nutrition are expected to improve the maximum growth and yield. This research used a Completely Randomized Design (CRD) Factorial, the 2 factors were observed. The first factor was planting media (M), which consists of 2 levels, which are M<sub>0</sub> (planting media without EM-4) and M<sub>2</sub> (planting media + EM4). The second factor was nutrition (N), which consists of 4 levels, which are N<sub>0</sub>: Control /without treatment (100 ml), N<sub>1</sub> : Coconut water (60 ml), N<sub>2</sub> : Leri water (80 ml) and N<sub>3</sub> : Bean sprout extract (60 ml). This research consists of 8 treatment combinations with 3 replications, so that there are 27 experimental units. The results showed that the media has significantly affect the speed of mycelial growth, the initial appearance of the fruiting bodies, the average diameter of the fruit caps, the number of fruiting bodies and the fresh weight of the mushrooms. The best media treatment is on media without EM-4. The best nutrition is found in leri water nutrition. There was an interaction between the use EM-4 on the planting media and type of nutrition on the start of fruiting bodies, the average diameter of the fruit cap, the number of fruiting bodies, the speed of harvest, and the fresh weight of the mushrooms. The best treatment is found in the (M<sub>0</sub>N<sub>1</sub>), that it treatment without media with leri water nutrients.

Keywords: Mushrooms, planting media, nutrition, growth