

## Abstract

White oyster mushroom is one type of fungus that is often consumed by humans. Therefore the business of oyster mushroom cultivation is growing to meet market needs. In mushroom cultivation, one of the most important things to consider is the temperature and humidity of the bag log storage room as a mushroom growing medium. The temperature and humidity conditions of these mushroom rooms are difficult to monitor and control periodically if done manually. In this final project the author designed a system of automatic white oyster mushroom monitoring. The system consists of DHT11 temperature and humidity sensors to acquire data to be processed using the Fuzzy method for automatic spraying and to be sent to ThingSpeak using ESP8266. Based on testing of the system for 20 days, it is known that the system can acquire the conditions of the temperature and humidity of the mushroom room, send it to ThingSpeak, and perform automatic watering based on Fuzzy processing of the data. The end result of the growth of oyster mushrooms treated by the system has a width of 7-8 cm with a total weight of 57.3 grams, while oyster mushrooms that are treated manually have a width of less than 2 cm.

Keywords: white oyster mushroom, sensor, fuzzy

