AUTOMATED MISTING AND ANDROID-BASED MONITORING SYSTEM FOR OYSTER MUSHROOM (*PLEUROTUS SP.*) PRODUCTION

CEDIE VINCE E. CABRERA

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ABSTRACT

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Adviser: **RAZEL ANN G. AGUILAR, MIT**

This study was conducted to maintain optimal temperature and humidity, which is crucial for Oyster Mushroom growth; otherwise, it could impede mushroom development. An automated misting and Android-based monitoring system was developed to address this challenge. Other studies have used an automated mister; however, System monitoring is unavailable. Davao del Sur State College mushroom facility relies entirely on environmental temperature and humidity. The findings are as follows: A DHT11 sensor was used to read the temperature and humidity within a 5m range from the sensor, spray mist when the DHT11 sensor detects a temperature of 28 degrees Celsius and 72 % relative humidity, HC04 Ultra-Sonic Sensor is used for water refill automation when the water reaches 7cm away from it, display humidity, temperature, and water level at 5-second intervals, and generate a graph based on average temperature,

humidity, and water level calculated per month. The result of the study contributes to the agricultural aspect, specifically in mushroom farming, hence decreasing the farmer's workload and increasing the harvest yield, farming automation, and academic research. The research outcome is a foundation for new studies leading to a better understanding of farming with a more enhanced system for a better farming yield.

Keywords: *Oyster Mushroom, DHT11 sensor, Ultrasonic sensor, Misting, Android-based, Temperature, Humidity, Water level.*