Power Analysis Of IoT-Based Automatic Mold Sprayer Tools

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ABSTRACT

Oyster mushrooms grow in a humid environment with low temperatures. Changes in weather that sometimes change can affect the growth of fungus, so it is necessary to design a tool that can help stabilize the surrounding temperature and humidity so that fungal growth is not hampered. The aim of the research is to produce an automatic temperature and humidity control system remotely and carry out analysis through testing to correctly conclude that the tool that has been made truly meets the criteria and can work well and optimally. Research methods include quantitative methods, data from research experiments seen from the resulting temperature and humidity values. The observation results show that the temperature and humidity every hour show stability with the data shown below the predetermined limits. The tests that have been carried out above can be concluded that all components of the system tools are running well and optimally as well. The conclusion is that all system equipment components are running well and optimally with the Relay components in good condition, the DHT11 sensor is readable, the highest error in temperature is 5.34% and the difference is 1.4oC in humidity. The highest result data is with an error of 8.1% and for a difference of 6%. The average response speed for the tool from off to on is 02.04 seconds, while for the on to off condition it is 03.27 seconds. The volume of water that the tool can use to convert into mist is 1.5 liters from a water tank volume of 10.8 liters.

__Keywords__: Oyster Mushrooms, Mushroom Mushrooms, Temperature and Humidity Control.