ABSTRACT

One of the most common sources of income in Indonesia is livestock, specifically broiler chickens. Broiler chickens have soft meat, large size, and relatively quick growth process of 4-9 weeks. The disadvantage of broiler chickens is that they require meticulous care because they are susceptible to disease. Other supporting factors are required to reduce the risk that occurs. The chicken coop is one of the factors that influence chicken growth. Because it can help regulate temperature and humidity, a close house coop is the best option. Temperature and humidity levels are important factors in broiler chicken growth. The temperature and humidity values in the chicken coop room must be in accordance with the ideal parameters for chickens based on the age of the broiler chickens, so tools to help workers monitor temperature and humidity are required. The DHT22 sensor is one of the sensors that can detect temperature and humidity, but their use is still considered suboptimal because the maximum radius of the DHT22 sensor that can be reached is unknown and remains within tolerance limits. In this reserach, using the standard deviation method to calculate a sensor's maximum range can provide a value that corresponds to its real conditions. According to the result of this research, the radius that DHT22 can reach in terms of effective temperature and humidity sensor readings is ± 6 meters in all directions when the sensor is placed at a height of ± 1 meter from the bottom of the coop.

Keywords: *Broiler Chicken, Close House Coop, Temperature, Humidity, DHT22, Standard Deviation*