

DESIGNING BROILER CLOSE HOUSE BASED ON ARDUINO TO CONTROL THE TEMPERATURE, MOISTURE, AND AMMONIA

Novendra Farisi

*Electrical Engineering Study Program, Faculty of Information Technology and Electro
Universitas Teknologi Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail : novendrafarisi@gmail.com*

ABSTRAK

The broiler is a type of chicken that is widely raised in Indonesia. This type of chicken grows fast around 4 to 6 weeks. To get the optimal yield of broiler, its house should design as good as possible, such as environmental conditions. A good broiler close house environment should have the appropriate temperature, humidity, and ammonia. Along with the development of technology in the field of electronics, a control tool for temperature, humidity, and ammonia is designed automatically based on the Arduino microcontroller. DHT21 sensor used to measure the temperature and humidity values in the broiler close house. DHT21 sensor is relatively accurate in perusal with an error of only 2.5%. The DHT21 measurement value processed by Arduino Mega 2560 displayed on the Liquid Crystal Display (LCD) 20x4. Arduino controlled the PWM fan speed with rotation values of 30%, 50%, 75%, and 100%, apart from that the Arduino also controls the heater and water pump. The MQ-135 sensor was used to detect ammonia levels in the close house, the maximum ammonia level in the house should not be more than 20PPM.

Keywords: *Sensor DHT21, Sensor MQ-135, Arduino, LCD*

