

***DESIGN AND CONSTRUCTION OF A MICROCONTROLLER  
BASED DETECTION TOOL FOR BREED CHICKEN EGG  
QUALITY***

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***ABSTRACT***

*The manual process of sorting chicken eggs by farmers and sellers is often time-consuming and prone to errors. This study designed a prototype of an egg quality sorter based on a microcontroller, using an LDR sensor to detect egg quality. The LDR sensor evaluates egg quality based on the intensity of light received. Test results showed that eggs with a lux value above 70 were categorized as high-quality eggs, while eggs with a value below 37 were categorized as lower-quality eggs. Additionally, the servo test produced a voltage of 0.13 V at a 0° angle and 4.78 V at a 90° angle. Out of 12 eggs tested, only 2 errors were detected. Overall, the success rate of this tool was 10 successful tests out of 12, yielding a result of 83.33.*

***Keywords:*** *Egg sorting, Microcontroller, LDR Sensor.*