EGG QUALITY SELECTOR DESIGN WITH EGG CONDITION AND WEIGHT PARAMETERS USING LDR AND LOAD CELL SENSORS

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ABSTRACT

Laying hens are adult hens that are reared specifically to produce eggs that contain animal protein and are highly nutritious. Eggs produced by laying hens have a level of nutritional value based on the external quality and internal quality of the eggs. The external quality of eggs can be seen from the weight, length and width of the eggs, shell weight, and specific gravity. While internal quality is seen from the yolk index, yolk color, and hough unit, egg traders and laying hens breeders also usually group eggs to determine prices, and most of them group and sort eggs based on size and weight. To determine the condition of the eggs in good or bad condition, the majority of breeders or sellers still use the traditional method by utilizing the light from a flashlight where when the light is translucent it will be an indicator that the eggs are in good condition, conversely when the light is not transparent it is an indicator that the eggs are in a bad condition. Based on these problems, it is felt necessary to have a tool that is able to detect the quality of eggs based on the condition and size of the eggs using a mechanic with a servo motor drive where with this tool the process of sorting the quality and size of the eggs can be done quickly and takes a shorter and shorter time. With a sensor efficiency level of 97% and a load cell sensor of 99.97%

Keywords*: Egg sorter, Arduino, LDR, Load cell*