

DESIGN AND DEVELOPMENT OF EGG QUALITY AND EGG SIZE DETECTION TOOL USING SERVO MOTOR AS EGGS MOVEMENT

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ABSTRACT

Laying hens are adult hens that are specially bred 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 egg. Most of them classify and sort based on the size and weight of the eggs. In determining the condition of eggs in good or bad condition, the majority of farmers or sellers still use the traditional way by utilizing light from a flashlight where when the light penetrates it will be an indicator that the eggs are in good condition, on the other hand when the light does not penetrate it is an indicator that the eggs are in bad condition. Based on these problems, it is deemed necessary to have a tool that is able to detect egg quality based on the condition and size of eggs using mechanics with servo motor drives. With this tool, the process of sorting egg quality and size can be done quickly and takes shorter and shorter time. This tool has a sensor success rate of 94% and a loadcell sensor of 98.21%.

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