

ABSTRACT

Sanitation of chicken cage can affect the chicken and its surrounding environment. Farmer must check and sanitize it to avoid the emersion of ammonia gas. Ammonia gas cannot be seen by the eye directly, but has a very bad impacts to chicken. The impacts are damage the respiratory tract of chickens, the eye membrane, growth and decreased egg production. At this final project, a smart enclosure prototype which has an automation module was created using Real Time Clock (RTC) scheduling. This chicken cage which is microcontoller-based can automatically sanitize by using a conveyor that simplify the sanitizing progress and can distribute evenly the chicken feces above wiper so it isn't accumulate on it using wiper. On the testing, the system runs well. Conveyor and wiper can be active automatically as scheduling that has been prepared and nonactive by itself after a half of conveyor spinning and takes 10 seconds with Pulse Width Modulation (PWM) that ranges between 120-150 so that the ash on the conveyor can be distribute evenly perfectly.

Keywords: microcontroller, conveyor, Real Time Clock (RTC), Pulse Width Modulation (PWM), Ammonia gas.