

ABSTRACT

Warehouse pests is one of the most issues that faced by paddy farmers. Rice as main food commodity for majority of Indonesian people, makes the supply must be continue because rice is a seasonal crop. Quality and quantity of rice depend on post-harvest handling, include pests control. Less than optimal monitoring of pests and poor post-harvest handling can cause losses of 1.2 to 1.8 tons of rice or grain for one hectare of rice fields. This final project research aims to create a prototype that can detect and identify pests inside grain and rice warehouse storage at Kecamatan Kandanghaur, Kabupaten Indramayu. The prototype will be created by using Wemos D1 Mini Pro microcontroller as the main control of the system which supported by 12.000 mAh powerbank which gives maximum power up to 5 and a half day and minimum power up to 3 days and 2 hours, PIR motion sensor as a tool in dectecting the presence of rats with effective range less than 40 cm and then the system will send notification to farmers via notification to the Android device that gives 96,43% of accuration rate and activate door lock solenoid actuator to lock the door trap. So this system is able to minimize the loss of Rp. 577.440 / month for rice and Rp. 277.100 / month for grain.

Keywords: *Warehouse pests, Wemos D1 Mini Pro, powerbank, PIR Sensor, Android.*