

## ABSTRACT

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PEST MONITORING SYSTEM IN CHILI GREENHOUSE USING IOT BASED WEMOS D1 R32

Keywords: Plants, Websites, Internet of Things, Wemos D1 R32, PIR Sensor, GY906 Sensor, ESP32-CAM

(xii + 35 + Appendix)

Chili is a plant that is widely cultivated by farmers in Indonesia, because chili plants have a high selling value. However, the selling price of chili tends to be unstable, this occurs because of the limited stock of chili stock and weather factors which result in chili farmers failing to harvest chilies. By predicting price of cayenne pepper, a pest monitoring system is designed using PIR sensors, GY906 and ESP32 CAM sensors, PIR sensors function to detect the movement of insect pests, GY906 sensors function to detect pest body temperature and human body temperature and ESP32 CAM functions to take photos of chili plants you want monitor if there are pests or not and spray spray liquid in the form of pesticides so that the insect pests go away. The Wemos D1 R32 microcontroller will receive from the PIR sensor, GY906 sensor and ESP32 CAM, where Wemos will be connected via a website in the form of firebase and mysql, the data generated by sensor. Wemos will change the data it receives from analog data to digital. The reason why using the website is because nowadays there are quite a lot of website users, and plantation land that is far from home can help farmers maintain the quality of their crops. Therefore this research This website uses a website as a control medium. With this background, an idea emerged from the author to be able to create an innovation in aquaponic farming technology with the title "Pest monitoring system in chili greenhouses using IOT-based wemos d1 r32" which can monitor and control pests on plants. chili automatically through the website.