DESIGN AND DEVELOPMENT OF MODERN AGRICULTURAL MANAGEMENT SYSTEM BASED ON THE INTERNET OF THINGS

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ABSTRACT

Agriculture is the basic foundation of a nation's economy, with development Good agriculture then the economy of a nation will be stable. Regardless of the abundance of agricultural land, rice farmers also always have several obstacles that can affect the decline in crop yields both in terms of quality and quantity. Decrease in quality caused by human error or farmer error in giving too much fertilizer excessive or less, while in terms of quantity the decrease was due to by pest attack. One of the factors causing the lack of agricultural productivity namely depending on climate change in the processing of agricultural land. Pest control, regulation of water content and fertilization of plants will be a problem for farmers. With the development of technology in the agricultural sector is a pest control tool and can regulate water levels and periodic fertilization can facilitate the work of farmers in reduce the impact of the decline in yields. By utilizing sensors capacitive humidity and pir sensor as input and output in the form of a water pump and buzzer from NodeMCU ESP8266 with an accuracy rate of 96.83% and a precision of 97.96% for capacitive humidity, and the level accuracy of 98.91% and precision of 99.57% for the pear sensor. Whole the system will be connected to the Blynk application which is connected to IoT (Internet of Things).

Keywords: *Agriculture, NodeMCU ESP8266, Iot*