ABSTRACT

Indonesia is a country that has various types of agricultural sectors, agriculture in the chili sector is one of the many agricultural sectors, but agriculture in Indonesia often raises various problems. Pests are one of the biggest enemies of farmers in the agricultural sector, so plants must be given more care, such as spraying pesticides on one of them. However, agriculture in Indonesia is still widely used manual spraying method that makes farmers repeatedly spraying.

This problem can be solved by making a tool in the form of automatic pesticide spraying based on IoT (Internet of Things) to monitor and control agriculture. The Smart Farming System has several electronic components, sensors and microcontrollers. The Smart Farming System uses ESP8266 as a microcontroller, soil moisture sensor to measure soil moisture, and DHT-11 sensor to measure air temperature and humidity. There are also other components such as relays, 16X2 LCD and mini pump. For monitoring, you can use the Blynk application available on smartphones. With this tool can make it easier to spray pesticides, with the controlling and monitoring features the tool will send data to the application regarding soil moisture, air humidity and air temperature.

This tool can facilitate the administration of pesticides automatically, by utilizing the Smart Farming System can monitor the administration of pesticides anywhere at any time, without having to repeatedly perform manual spraying. Based on information from various sources, the ideal soil moisture for Chili Peppers is 30% to 50% while the ideal temperature is 20 °C to 30 °C, and the air humidity is at 60% to 80%. With this tool can help plants can be maintained optimally and can produce a quality harvest..

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