

DESIGNING AND IMPLEMENTING SOIL QUALITY READING SENSOR USING INTERNET ON ARDUINO BASED WIRELESS

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ABSTRACT

To facilitate online periodic monitoring at rice field, it is necessary to develop a soil and water quality monitoring tool by reading data in real time. This sensor is not only for monitoring the rice fields but also for getting more efficient water control by sending information on the condition of the rice fields. This information can be conducted by utilizing the concept of the Internet of Things. In this research, a soil quality reading sensor was designed by utilizing internet network communication on Arduino based wireless. In this design, the components used were Arduino ESP8266, soil PH sensor, moisture sensor, DHT11 sensor using a tube diameter of 8cm as a cover. The tests showed that the tool can display the values of temperature, humidity and soil pH parameters on the Android application in real-time. Indeed, it can provide information to farmers on further actions to conduct.

Keywords: *Internet of things, Blynk, soil moisture, soil PH.*