ABSTRACT

Indonesia is an agrarian country, where there are many farms, but because lack of effective processing and other various factors, there are a lot of inevitable happened, such as a lot of edible agricultural pests, less water or even flood and so forth. In a farm, irrigation is an important thing; the irrigation will be different for the area that often, seldom, and never had rain, besides we have to water it in accordance to the needs of the farm itself. So it needs a tool that facilitate in terms of irrigation.

On this project of making a microcontroller-based tool, which can make it easier in terms of irrigation, agricultural land later checked by a land moisture sensor, in this Final Project used 808H5V5 sensor, processed by a microcontroller and the results of soil moisture displayed on the LCD. Directly, it can direct the irrigation system to the farm that the humidity had been measured, if the land really needs water or measure other land as comparison so that it can prioritize which land needs water.

Most of all them, this tools not yet perfect, because for detection on dry plant, because of sensor detection for temperature too and sensor need full of power to detection. Although microcontroller AVR ATMEGA 8535 can display appropriate result detection on LCD.

Keywords: microcontroller, farmland, irrigation

PERANCANGAN DAN IMPLEMENTASI PROTOTIPE SISTEM PENDETEKSI KELEMBABAN TANAH UNTUK PENGAIRAN DI PERKEBUNAN DENGAN SENSOR 808H5V5 BERBASIS MIKROKONTROLER AVR ATMEGA 8535 /

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