

ABSTRACT

***MONITORING SYSTEM OF WATERING AUTOMATION
SYSTEM BASED ON SOIL MOISTURE AND TEMPERATURE
USING***

Agriculture already become a kind of activity that liked by most of the community. Unfortunately, most of them thinks that taking care of the plants such a waste of time. The responsibilities on doing agriculture activities mostly related with soil moisture. A good producer knows that the key to high quality crops is proper moisture monitoring from beginning to end. Soil moisture determined by the quantity of water it contains. Since the only way to know it's level is only by using soil moisture meter or taking some sample to laboratory is still complicated, it become a problem. In addition to the water content of soil, plant also affected by temperature factor around the plant. For example of chili plant that will grow at 24 – 28 °C[7] .

To simplify the method, we create an android-monitoring system which can be linked to irrigation system. The sensor of the device will be plugged into the soil, and analyse the recorded data with **Arduino Uno**. The processed data will sent directly to android-base smartphone, which present the outcome result on an application. The application will present 3 kind of soil condition; dry, wet or moist.

The result of this final task is measuring of humidity level and temperature level with accuracy 3,08 % wich can be read with Android smartphone using fuzzy logic method.

Keywords: Chili, soil-moisture, temperaure, Android