ABSTRACT

Indonesia is a country that has great potential in agriculture and plantations. One of the products of Indonesian plantation crop is soybeans. Soya bean production in Indonesia is not sufficient demand in the country. Yields per year for these plants tend to decline. To obtain yields with good quality and quantity, need for watering according to plant needs, the value of soil moisture and temperature are important factors that must be considered. Developments in the field of agro technology greatly improved, automated irrigation system was introduced, some of them using monitoring system in better automatic irigation system. With the monitoring system, watering is done based on the circumstances surrounding the plant. This research aims to create a monitoring system on soybean monitor soil moisture and temperature conditions around the plant. The chosen embedded system device was the Raspberry Pi, serving as a data processing center. The system is equipped with sensors capable of transmitting the values of soil moisture and temperature soybeans to the server in real-time, this data will become the reference for automatic watering.

Keywords: Soybeans, monitoring system, embedded system, raspberry pi, sensor, web server.