ABSTRACT

Melons are one of the superior, high-value commodities that are popular with Indonesian people because they have advantages in terms of sweet taste, and have a crunchy and juicy flesh texture, however melon production is decreasing every year. In urban farming methods which are increasingly critical amidst rapid urban growth, the implementation of automatic watering tools for melon cultivation in Cilapar Village is an important innovation. This system is designed to optimize the management of melon plant growth by utilizing soil moisture sensors so that it is hoped that it will be able to increase melon production. This research aims to design an automatic watering microcontroller device and measure the accuracy of data on humidity sensors on melons and compare the accuracy with a soil meter measuring instrument. Measure and increase the growth of melon plants to achieve maximum growth in a shorter time than those that do not use automatic watering tools. The research method used is the method of data collection and literacy studies from previous research. Based on test data, the accuracy of the sensors used in this system is categorized as good with the YL-69 sensor having an error value of 3.18% and an average accuracy of 96.81%. In testing the height of the melon plants using an automatic watering device, they were able to reach the maximum plant height in the 7th week with a percentage of 16.67%, while the weight of the melon plants themselves experienced the highest ratio in the 7th week with a percentage of 66.67%.

Keywords *: Melon, Automatic Waterer, Soil moisture sensor, accuracy, error.*