

ABSTRACT

In hydroponic planting techniques, water quality, nutrient content and pH levels of water must be highly considered. Fulfillment of nutrients that are lacking will result in growth and quality of these plants. In this final project, a pH water regulation automation system has been realized that is able to automatically correct the pH value of the water and provide information about water temperature and nutrient density conditions or the ppm (parts per million) dissolved in it. This system can detect pH levels of water starting from 0 to 14. This automation system has a water pH value adjustment menu whose lower limit and upper limit values can be adjusted as desired. Evidenced by the results of testing when the automation system is set the upper limit value of 7 and the hydroponic system has a pH value above 7, the water regulating automation system will activate the ph up pump that pumps the ph up liquid for 5 seconds into the water storage tank. Then the automation system waits for a stable pH value for 1 minute and if the ph value has entered the specified limit then the system will standby until the next pH value changes.

keywords: Hydroponics, water pH, ppm/parts per million