Abstract

The condition of water pH level and temperature in catfish breeding pond often experience instability. This is because of many factors such as rainfall;climate tends to head or cold; buildup or spoilage of food fish in the pond. The farmers also find it difficult having to check the pH level and temperature of the pool water manually continuously. The good pH and temperature for catfish growth is about between 6,5- 8 and 25-30 degrees Celsius. A way to face the pH instability and water temperature quickly and accurately is by utilization Arduino microcontroller with water pump actuator and heater to automate conditioning pH level and temperature of the catfish pond. In this final paper the writer build a system that is able to detect the PH level and water temperature and can switch on the heater and water pump as a water conditioner tool using a microcontroller that is monitored by LCD (liquid Cristal display). The results of testing the difference in temperature sensor, the sensor can work well with the value of the accuracy of the sensor below ± 0.05 degrees Celsius and the results of testing of the difference in pH, the sensor is able to work well with the value of sensor accuracy under ± 0.05. The results of testing the functionality of neutralizing the water temperature, the heater is able to neutralize the water temperature with an average change in the water temperature of 0.18 degrees Celsius per minute. The results of testing the functionality of neutralizing pH alkaline water, acid pump capable of working to lower the pH of water with an average change of pH 0.17 per minute and for testing the functionality of neutralizing the pH of the water is acidic, alkaline pumps capable of working to raise the pH of the water with an average change of pH 0, 17 per minute.

.

Keywords*: pH, temperature, automation, catfish.*