ABSTRACT

The water level and the power of hydrogen (Ph) quality that is less than ideal can cause a lack of free area and lack of oxygen in the water which results in unhealthy fish and even if the pH level is too low or too high, it can interfere with fish growth, even kill fish. farmed fish. In addition, the water level of the pond in the open area is also affected by rain water which can cause the water in the pond to overflow, the water becomes acidic which can also cause the health of the fish to be disturbed.

Based on these problems, a control system for water level and water pH was made in fish farming. In this study using 2 parameters, namely water level and rain as input controlled by Arduino and giving output in the form of pump control to fill, reduce or replace pool water. To determine the output using several types of sensors, namely rain sensors, pH sensors, and water level. At the end of the study, it can be concluded that this system is able to control the height and pH of the water. The control of water level and water pH with equipment such as a water level sensor, Arduino Mega 2560, Wemos D1 mini, and relays can be integrated as IOT and web monitoring services. This research has specifications for controlling pH and water level automatically.

From the results of implementation and testing, the tool can work automatically to increase or decrease the pH to normal pH properly and with various times depending on the initial temperature before normalization by the automation tool. From the test results for 5 days, the lowest pH was found on the day at 08.00 which is
6.95 takes 240 minutes to reach a stable pH of 7 at 19.00 and the pH Meganatural changes 6.98 takes 60 minutes to reach a stable pH of 7.06 at 20.00. Then the results of testing the delay in sending data from the database to the monitoring website obtained the average value of the data delivery time, which is 0.15 seconds.

Keywords: *Water pH,Water Level,fish,sensor,automation,Control*

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