ABSTRACT

DESIGN AND IMPLEMENTATION AUTOMATIC GOLDFISH EGGS TREATMENT SYSTEM IN HATCHERY EGGS PONDS

The quality of fish production is inseparable from the quality of the seed produced during the nursery. Good fish seeds are produced from spawning and hatching of well-preserved eggs. Therefore, it is necessary to establish a system that can monitor and care for fish eggs so as to minimize fish eggs that fail to hatch and improve the quality of fish seeds that will be produced when hatching fish eggs.

This study aims to create a system that can perform automatic monitoring and maintenance of fish egg hatching ponds. This hatchery pool treatment includes water temperature control, water level control and displays water pH values. Sensors used to measure hatching egg parameter parameters include temperature sensor ds18b20, ultrasonic sensor and pH sensor. The sensors can detect the condition of the fish hatching pond that will affect the aeration system, water heater and cooling fan in the pool works automatically which will then be displayed on the LCD.

The system is built in stages starting from mechanical design, sensor calibration, microcontroller and actuator configuration, sensor readout synchronization, monitoring display and parameter measurement. The final result is a prototype that has been tested on hatching fish eggs so that it can optimize the hatching of fish eggs into fish seeds.

Keywords: Controlling, Monitoring, Fish Eggs Hatching Pond.