ABSTRACT

Agriculture is a human effort in managing biological resources to produce food and industrial raw materials, to support success in managing agriculture, a correct irrigation process is needed, irrigation is a process to irrigate agricultural land, but irrigation in Indonesia on average still uses rice field irrigation with manual sluice which requires farmers to open the sluice gate by lifting it.

With this research, an automatic sluice control system is needed that can be controlled by an application using the fuzzy logic method that compares two conditions, namely water level and river water discharge, the tool made in this study is only a prototype.

Based on the results of the tests that have been carried out, the irrigation gate system has been running automatically and has an accuracy of 98.73%, the implementation of the fuzzy method embedded in the percentage output of the sluice height in the range 0-100% has been successfully carried out, as well as the land stability system. which has been able to maintain a stable water level at 10 cm.

***Keywords**: Irrigation, Control, Fuzzy Logic, Agriculture, Prototype.*