ABSTRACT

Poultry production is one of the national needs. Hatching of eggs into poultry is very important for poultry production. The principle of hatching eggs is to keep the temperature, humidity and fan speed conditions stable. There are several methods that can be applied in making egg incubators, one of which is *Fuzzy Logic Tsukamoto* method. *Fuzzy Logic Tsukamoto* method in this study functions as a fan speed regulator. *Fuzzy Logic Tsukamoto* is the right method for mapping the input space to the output space. This method is an algorithm that will become the brain of the incubator.

This research aims to develop an egg incubator or often called an incubator by utilizing internet and IoT technology. Incubators generally use a 5 watt incandescent lamp to maintain room temperature and a fan as air circulation. This incabtor system uses a DHT-22 temperature sensor and a water level sensor which functions to read the water level, as well as a DC servo motor that moves according to a predetermined time. The temperature data obtained from the DHT-22 sensor is collected on the microcontroller and then sent wirelessly to the Internet. The test results show that temperature, humidity and light status data can be read in real-time using the IoT platform, and can also be accessed using Telegram bots.

With this system, poultry farmers can monitor the condition of the eggs that have been inserted into the egg incubator remotely easily by using the telegram bot application. Therefore, it is hoped that this system can provide farmers with better egg production and improve egg quality.

Keywords: *Fuzzy Logic Tsukamoto,* Sensor DHT 22, IoT, Incubator