ABSTRACT

Indonesia has many types of root crops, for example cassava or in scientific language is Manihot esculenta crantz. One of the results of processing cassava is tapai. In the process of making tapai, there are many aspects that must be monitored directly because they are related to the quality of the resulting tapai. Until now, the manufacture of tapai still uses conventional or traditional working principles.

The focus of research in this Final Project is automatic fermentation in the cassava fermentation process, so that the fermentation process does not need to be done manually using human hands to spread the yeast evenly on the cassava. For the automatic yeast sowing process, a motor is used as a stepper which can be controlled and monitored using the application blynk. In addition, it can also be controlled manually using the button feature limit switch given. Manual control system is made to overcome if the network quality is not good. The system is designed to be able to: (i) control and monitor yeast sowing using applications in the fermentation process, (ii) control and monitor yeast sowing in the fermentation process manually by using limit switches.

In the operation of sowing yeast using the application, blynk it takes 1.4 seconds longer than the limit switch, this is because the use of the application blynk takes time to transmit data via the internet network. This fermenter can only ferment a total of 1 kilogram of cassava and with a yeast weight of 30 grams to get good tapai results.

Keywords: *cassava fermentation, tapai, yeast, stepper motor, limit switch, manual, application, blynk, control, monitoring.*