ABSTRACT

Kitchen waste fertilizer is fertilizer made from plant or animal material that has undergone several processes. In this research, kitchen waste fertilizer will be made using waste originating from discarded food waste that is considered unusable. Processing kitchen waste needs to be done in order to reduce negative impacts on the environment. This research aims to design and develop a control and monitoring system during the process of making fertilizer made from kitchen waste. This research also aims to obtain fertilizer results that meet standards by using a control system. During processing, there is a process of changing kitchen waste which involves the physical, chemical and biological aspects of the waste. In this research, a control and monitoring method will be used for making kitchen waste fertilizer which uses direct or real time monitoring of containers and is accompanied by a telegram bot. This control system is designed to use a container to maintain the conditions of fertilizer determining parameters such as pH, temperature and humidity. The recommended pH value for compost fertilizer ranges from 6-7, the recommended humidity is 50 – 60% while the recommended temperature for kitchen waste fertilizer ranges from 30 – 35 degrees Celsius, at this point, the activity of microorganisms plays a key role in the composting process so that approaching the ideal conditions that should be achieved. With a control system that can control and monitor fertilizer during the decomposition process, the values of parameters such as pH, temperature and humidity can be controlled so that you will get ideal fertilizer results with a temperature of 28°C, humidity of 49% and pH 7. 13 which is in accordance with national compost fertilizer standards.

***Keywords**: telegram bot, humidity, pH, kitchen waste fertilizer, temperature.*