

## **ABSTRACT**

Indonesia is an agrarian country with a center on the process of planting, the plantation sector which is increasingly growing in Indonesia makes the emergence of various methods in increasing the production of the plantation sector fertilizer in order to increase productivity by 5-18%, including the use of fertilizer itself is a substance or substances which are put into the planting media to meet the nutrients needed by plants to be able to produce well (Husni, 2015). With the increase in the plantation sector, fertilizer use has also increased in that sector, and now it is not only the plantation sector that is increasing in the use of fertilizers, small-scale sectors such as households are now using fertilizers as the development of farming trends with hydroponic technology, apart from that, it is better for the household sector to utilize the waste generated from the rest of the kitchen so that it can be processed into fertilizer so that the volume of waste contained in the final disposal site (TPA) can be reduced, because garbage is processed in advance to become fertilizer which will later be used for farming. However, making fertilizer is quite difficult, if it cannot be controlled and monitored properly it can increase the pathogens that can damage the fertilizer. Therefore, an Internet of Think (IOT) based system called electrical composter was designed to facilitate the household sector in producing its own fertilizer. In the system that will be designed, there are several main processes, namely the process of regulation for cutting, drying process, and also monitoring when fertilizer is in the production process. And to design this system it will use the waterfall method which is a method that moves from one phase to the next so that it allows a little change because the system development process using this method has good documentation so that it reduces errors that can change the design of the system on a large scale.

**Keywords:** Compost, Internet of Think (IoT), Waterfall, Electric Composter, Household Waste.