

Abstract

Red onion is one of the leading vegetable crops and a source of income and employment opportunities are high enough to contribute to the economic development of the region in Indonesia. In recent years, the demand for onion seeds and for domestic consumption increased. In relation to increased production and quality of red onion as well as in the sequel to reduce the number of imported onions, somethings or ways have to do to improve production and good quality. The drying process before it enters the storage phase is one thing to prevent decay rate so that the quality of the onion will remain intact. The drying process can be referred to as a process of withering red onions (hereinafter referred to as drying).

Temperature and humidity monitoring system in onion drying using a wireless sensor network is aimed to facilitate the monitoring of the onion when dried and can activate an actuator in the form of heating to maintain the temperature to keep it hot (between 45°-50° celcius (fast method)) . Wireless sensor network is a set of tools for wireless network that has one or more sensors to capture information or data that is likely to change.

This concept is expected to be a solution and an easy way to monitor the temperature and humidity in the drying process of red onion. And with the actuator in the form of heating that can be activated as an act to any change temperature conditions will further facilitate the process of monitoring and reduce the human resources needed. In other words, this actuator serves to adjust the temperature to keep it hot and high in accordance with the required or desired temperature and keep moisture.

Keywords : red onions, wireless sensor network, temperature, moisture, drying, withering.