

ABSTRACT

Soybean is a commodity that is widely consumed by Indonesian people. The high consumption of soybeans has made Indonesia import more than 2.4 million tons of soybeans in 2021. Many soybean imports are due to the high demand of the Indonesian people. One effort to address the need for soybeans is to provide superior soybean seeds. BPSB West Java as one of the Technical Implementation Units (UTP) of the Food Crops and Horticulture Office of West Java Province has the task of overseeing the quality and certification of soybean seeds. All environmental maintenance for soybean seeding is carried out manually by BPSB West Java periodically every day.

Soybean seed environmental protection tools are made based on the Internet of Things (IoT). IoT was chosen because it has the technology to collect data from sensors and cameras that can be displayed in the form of a website. The website is used by considering user convenience in accessing soybean hatchery environmental data. The website will display data from sensors regarding the environment in realtime and can save images from the camera in stages every day.

The results of testing the website functionality get results that are as expected with the appearance and feature running smoothly. The results of performance testing from a range of 0-100 get a value of 100 for the desktop display and 94 for the mobile display which indicates the website is running well. The QoS test results obtained an average throughput is 469.50 bps, a delay is 0.03 seconds, and a packet loss is 0% which meets with ITU-T G.1010 standard that delay is lower than 2 seconds and packet loss is 0%. The results of user experience testing show that users are very satisfied with the services provided.

Keyword: Soybean, Internet of Things, Website, Realtime