

## ABSTRACT

Nowadays, healthy and risk free foods play an important role in our day to day life. So it is necessary to monitor the environmental conditions and parameters which are inside the grain (Barley, Brown rice, and Buckwheat) storage containers and taking care of it. The conventional rigid and energy-limited battery-powered wireless sensor network (WSN) needs to be improved for guaranteeing food quality and safety in cold storage. In the process of grain storage, temperature and humidity are two factors that can affect the quality of grains. The main purpose of the system is to acquire data from different sensors and transmit this data wireless connectivity through IOT(Internet of Things) to access the status of granary. If the temperature of grains storage room exceeds the specified threshold level then the system produces alert. The proposed and developed system could effectively wirelessly monitor the temperature and humidity in real time by solar energy harvesting and Electricity with uninterrupted power supply to ensure the food quality and safety in storage.