Project Title Smart Mushroom Farm using Long Range Wireless

Communication Technology

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**Abstract**

The thesis aims to designs and construct a mushroom hatchery, That can control the temperature, humidity and light within the hatchery to suit the flowering of mushroom. Design and build web applications and window applications that can monitor the environment and control the hatchery system and have applied for LoRa communication to serve as a communication medium between Mushroom Mode and internet area (STA Node) to solve the problem of house location without internet signal, And organizer can apply Current Sense Resistors to check whether the device is actually working as it is controlled or not. To provide the correct display of the working situation of various devices.

The mushroom cultivation experiment is a test of the effectiveness of intelligent mushroom hatchery in real mushroom cultivation experiments. Using fairy mushrooms to conduct experiments. From the mushroom cultivation experiment between October 8, 2020 and October 21, 2020, a total of 14 days can be summarized as follows. Cultivation of mushroom in a hatchery that is environmentally controlled to suit mushroom flowering. The average flower width was 7.66 cm with the total weight of 1.06 kg. Mushroom cultivation in the hatchery without environmental control to suit mushroom flowering with the average flower width of 6.45 cm with total weight of 0.6 kg.