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The development of smart farm systems by controlling via the internet

The aim of this research was developed for agriculture by using internet technology to control plant growth factors with automation. Plants are planted in greenhouses to facilitate control of various factors affecting plant growth. A greenhouse dimension of 2 meters width, 3 meters length, 2 meters high, and the volume is 10.5 cubic meters. The greenhouses are covered with plastic to prevent insects. However, this will result in an increase in the temperature inside the greenhouse. Therefore, an exhaust fan and spray unit are installed in the house to help reduce the temperature. In addition, a temperature sensor is installed to determine the operation of the fan and spray unit. There was also a soil moisture sensor be used to compare the optimum moisture to the actual humidity to control the soil moisture according to plant growth.

The temperature sensor was calibrated by comparing the temperature measured by the sensor with the temperature measured by a thermometer. The statistical results showed that there was no significant difference between the temperature measured by the sensor and the thermometer. The temperature control capability was then tested by measuring the temperature both outside and inside the house. The result was no difference, indicating that the temperature was well controlled. Kale growth was compared between kale grown in greenhouses and kale grown outdoors. The results showed that the overall growth in the first period was not different and the later period of kale grown in the greenhouse showed better growth.

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