DESIGN AND DEVELOPMENT OF AUTOMATED LIGHTING AND DRIP IRRIGATION CONTROL SYSTEM FOR DRAGON FRUIT

Undergraduate Design Project
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VAN GLENNARD G. ASTUDILLO
NEIL HENRICH M. DOGELIO
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ABSTRACT

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The study, entitled "Design and Development of Automated Lighting and Drip Irrigation System for Dragon Fruit" was designed and constructed at Brgy. Buho Silang Cavite from March 2017 to October 2017. This was tested and evaluated at Brgy. Guyam Indang Cavite from February 26 to April 13, 2018.

The design project was conducted to develop an automated lighting and drip irrigation control system. Specifically, it aimed to design and develop a lighting and drip irrigation system that is being controlled by a micro-controller based circuit and to develop an application using the Arduino framework.

The automated lighting and drip irrigation control system starts turning on the device. For the lighting system, once the LDR (Light Dependent Resistor) detects that if there is no any form of light the installed light bulbs will turn on automatically and it should be turned off when the LDR detects a light from the sunlight. For the drip irrigation system, once the soil moisture sensors detect that the soil is dry the solenoid valve would turn on and water the soil until the soil moisture sense that the soil is wet, the solenoid valve would turn off. And all the data gathered from the illumination system and drip irrigation system was saved in the SD card.

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