REAL TIME MONITORING HUMIDITY AND TEMPERATURE IN TISSUE CULTURE GROWTH ROOM OF OIL PALM

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ABSTRACT

Malaysian Palm Oil Board (MPOB) is a board that organizes and manages the oil palm plantation, production and research in Malaysia. MPOB has use tissue culture technology to produce high yield clone palm oil. To produce high yield clone palm oil, temperature and humidity of young oil palm must be suitable to ensure that they can grow well. The temperature and humidity for each young oil palm are difficult to identify because the large amount of vessels in tissue culture laboratory that need well-kept surveillance and requires more man power to handle each beaker. As the innovative way to overcome this problem, a wireless technology has been implemented to the oil palm tissue culture. This project suggests the usage of both hardware and software in sensing and recording data of temperature and humidity of oil palm tissue culture. Hardware elements incorporate with the aid of sensor of humidity and temperature (SHT11), Xbee Module, LCD and also with a backbone of a PIC microcontroller will transmit data wirelessly. Results will be presented and simulated on the software end. A Humidity and Temperature graphical user interface (GUI) was developed by using Visual Basic 6.0 (VB6) languages which highlights the user friendly attributes. This project also completed with alert system which has function to transmit a message via text message to user and warning them accordingly.

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