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(57) Abstract :

Aeroponic is the method of cultivating plants inside a conditioned air environment without the use of soil or water medium. This method grows plants suspended in a closed or semi-closed environment (chamber) by spraying the plant's dangling roots and lower stems with a nutrient rich solution. Aeroponic techniques have proven to be commercially successful for propagation, seed germination, seed potato production, tomato production, leaf crops, and micro-greens. Vegetable crops like potato, yams, tomato, lettuce, and some leafy vegetables are being commercially cultivated in the aeroponic system. Aeroponics appeared to be a highly feasible method to produce both aerial parts and roots. Under these circumstances, a controlled environment has a strong potential to improve plants' developmental stages, health, and growth. The monitoring system was used to monitor the chamber's parameters such as temperature and humidity. Meanwhile, the control system is used to manage actuators in delivering water and nutrients. Temperature and humidity data will be displayed on the LCD and transmitted to the computer to facilitate easier monitoring of the plant growth chamber.

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