

ABSTRACT

Along with the rapid development of urbanization trends today, many people who live in cities with limited space want to create a greener feel by keeping ornamental plants. One type of ornamental plant that is quite popular is anthurium. To support the maintenance of anthuriums, proper maintenance techniques are needed according to the environmental conditions of their natural habitat. However, anthurium maintenance is not easy because anthurium plants are included in one type of ornamental plant that is sensitive to environmental conditions such as temperature, humidity, and also light intensity. Currently, technology has been developed that can help the growth and development of anthurium, namely Grow Technology. The purpose of this research is to design and develop products that can facilitate users in caring for and enjoying the beauty of ornamental plants. The research utilizes the URBANISCAPE concept, a device with a closed-space design aimed at creating a greener urban environment. URBANISCAPE allows users to automatically regulate and monitor the plant growth environment, equipped with various sensors, actuators, and interfaces to facilitate environmental control within the URBANISCAPE. The research results indicate that: 1) URBANISCAPE can monitor temperature with a minimum value of 0.1°C and a tolerance of 0.5°C. 2) It can monitor humidity levels within the product with a minimum value of 1% and a tolerance of 1%. 3) It can monitor the average light intensity within the product with a minimum value of 1 Lux and a tolerance of 204.8 Lux. 4) The product maintains temperature levels not exceeding 28°C. 5) URBANISCAPE can regulate light intensity from 512 Lux to 4500 Lux. 6) The product can control humidity levels from 55% to 99%. 7) The user interface on the product can display sensor data and receive user input. 8) 83.9% of respondents chose the URBANISCAPE design as a solution. 9) It can accommodate 50 juvenile ornamental plants. 10) Ornamental plants are healthier after 30 days in the Urbaniscape product because it provides optimal conditions, unlike terraces and rooms that affect plant health.

Keywords: Anthurium Grow Technology, URBANISCAPE