

Effect of nutrient spray interval and light quality in root zone on growth characteristics of *Anthurium andreanum* L. in aeroponic system

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Abstract

In order to determine the most appropriate nutrient solution spraying interval and effects of light quality in the root zone on anthurium in aeroponic system, a split plot experiment, with completely randomized design, was carried out in a greenhouse located in the city of Karaj, Iran. In this study, time between the sprays was the main plot and consisted of two levels (2 minutes spray and 30 minutes without spray, and 2 minutes spray and 45 minutes without spray) and color of the containers was the sub plot at three levels (black, blue and red). Results showed that 2 minutes spray and 45 minutes without spray increased number of leaves and shoot fresh weight much higher than 2 minutes spray and 30 minutes without spray. Study of light quality in the root zone showed that black color of the containers, by increasing total leaf area and shoot dry and fresh weight, was the best color treatment. Blue color in the root zone had the most influence on final root length; but was not able to increase root dry and fresh weight, because of higher number of roots in other color treatments. In general, spraying nutrient solution for two minutes, and 45 minutes without spray, along with black color containers in the root zone was the best treatment for most growth characteristics of the anthurium plant.

Keywords: Color of the root zone, Soilless culture.

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