The effects of alternating red and blue light irradiation on the growth and physiological characteristics of blueberry

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Abstract

Under the alternating irradiation of red and blue light, the morphological parameters, pigment content, activity of antioxidant enzymes and stomata of plants will all have certain effects. This study took blueberry tissue culture seedlings as the objects to analyze the effects of 6 kinds of red and blue light treatments on blueberries. The data results showed that the leaf length and leaf width were the largest in T3 treatment, and the stem length in T5 treatment; T3 treatment had the largest stomata, T4 treatment had the largest stomatal opening, and T1 treatment had the largest number of stomata; the content of free proline was the highest; the content of soluble sugar in T4 treatment was the highest; The superoxide dismutase (SOD) and peroxidase (POD) activities were the highest in T2 treatment. The effects of morphological parameters and physiological characteristics of blueberry tissue culture seedlings by alternating irradiation of red and blue light can be used as an important theoretical basis for blueberry factory seedlings.

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