

ABSTRACT

Spinach is greenery planted for the consumption of the leaves. In some developing countries, spinach has many enthusiasts because there is a lot of good nutrient for the body. However, the limitations of land and erratic weather are becoming constraints in meeting the needs of spinach. The solution to overcome this problem is to plant spinach plants in the room with LED lights as an alternative to sunlight so that plants can still carry out a photosynthesis process. This research aims to determine the effect of differences in light intensity received by plants on the growth of spinach plants in the room.

This research was carried out in 10 planting rooms with different light intensities using red and blue LED lights. Daily observation process includes observation of LED light intensity, humidity, room temperature, plant height, leaf length and the number of leaves. The results showed that when using a combination of red and blue light, the quality of the plant is better than using red and blue light separately and the optimal intensity that can be used is 68 Lux with a life span of 22 days with a maximum height is 4.71 cm.

Keywords: spinach, LED, intensity