

Effect of Energy Saving Light Bulbs on Plant Growth and Cut Flower Production of Ginger Lily

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Abstract

In this experiment, energy saving light bulbs and incandescent light bulbs were used for producing ginger lily flowers at night for comparing the electricity cost. The results showed that, the energy saving yellow light bulbs treatment had 55.24% higher in cut flower production yield compared to control treatment (no lighting during night). It also had 1.97% higher in yield compared to incandescent light bulbs treatment. Energy saving white bulbs treatment didn't increase production. The cut flower quality (the scape length and panicle length) had no significant difference between energy saving yellow light bulbs and incandescent light bulbs. To conclude, energy saving yellow bulbs treatment on ginger flowers during night period could increase production significantly, in addition the power consumption was only 25% compared to incandescent light bulbs, which achieved the purpose of energy conservation and carbon reduction.

Key Words: ginger lily, cut flower, energy saving yellow light bulbs, energy saving white light bulbs, incandescent light bulbs

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