

**Performance assessment of bell pepper (*Capsicum annum*) in a newly formulated hydroponics nutrient solution**

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Hydroponics is an intensive method of production, where the production is more often done within controlled environmental structures, while a range of parameters like light, relative humidity, temperature, water, nutrients, diseases etc. are strictly controlled. This study was carried out to compare the performance of bell pepper (*Capsicum annum*) variety 'EDINO' in newly formulated crop specific nutrient solution compared to Albert's solution in coir dust medium. The experiment was conducted under the protected house located in the Faculty of Agriculture, Mapalana, Kamburupitiya using a drip irrigation system.

During the experiment, air temperature in the green house varied between 27 °C and 36 °C. In the protected house, light intensity was in the range of 648\*100 to 88\*100 Lux and the relative humidity fluctuated in the range of 61 % and 86 %. Medium temperature of the crop varied within 24.8 °C and 30 °C.

The results of the performance of the plant revealed that, plant height, number of leaves, number of flowers, number of fruits and yield (first harvest) per plant were considerably high when bell pepper is grown in the new solution compared to Albert's solution. Number of flowers per plant had a 20 % increment over the Albert's solution when the plants were grown in the new solution. Corresponding yield per plant was 267.94 g and 318.41 g when bell pepper was grown in Albert's and New solution respectively. Plants grown in new solution have shown 18.8 % increment in yield. Further the production cost is less for the new solution than for the Albert's solution.

Hence, the newly formulated solution can be recommended as a low cost hydroponics medium for bell pepper.

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