Effect of Different Foliar Applications on Yield of Japanese Cucumber (*Cucumis sativus* L.)

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Japanese Cucumber (*Cucumis sativus* L.) is cost effective crop can be grown under controlled environment (soil less culture). In soil less culture, nutrient management is the one of the important factor to consider. Though Albert's solution is commonly used hydroponics fertilizer mixture in Sri Lanka, there are certain limitations in using this fertilizer. Most of the farmers use Albert solution as fertilizer with imperfect media as a result; weak growth, nutrient deficiencies and low yield can be seen in cultivation. To eliminate these problems, foliar nutrient supplementation may be beneficial. Therefore, this experiment was done to study the growth and yield performances of Japanese cucumber as affected by Nano fertilizers. As treatments three Nano fertilizers were used namely Winner gold, Winner fast and Herbergreen and Albert's solution used as control treatment. Experiment was done under controlled environment in Ruhuna model Farm, Kamburupitiya with three replicates and Factorial completely randomized design was used as experiment design. In this study, both growth and yield parameters were taken. As growth parameters, height of the vine, leaf area of 5th and 14th leaves and number of leaves per vine were measured. Then as yield parameters average fruit yield per vine, average fruit length and average fruit circumference were taken. The vein heights in early stages were given significant different between treatments. The highest average vine height was recorded at 2 weeks and 4 weeks after planting in Herbegreen treated plants 42.3 cm and 117.6 cm respectively. Yield parameters were significant different among treatments. The highest average yield per vine (1125 g) and average fruit length (16.5 cm) were observed in Herbegreen treated plants. But nutrient application frequencies did not significantly affect to the growth and yield of cucumber. Therefore, Herbergreen, Nano fertilizer can be used as a foliar spray together with Albert's solution as a supplement to increase growth and yield of Japanese cucumber.

Keywords: Nano fertilizer, soilless culture, Albert's solution, hydroponics

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