

**EFFECT OF NUTRIENT SOLUTION (ALBERT SOLUTION)
CONCENTRATION ON GROWTH AND YIELD
OF MINT (*MENTHA SPICATA*)**

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World popularity for mint (*Mentha spicata* L.) is growing at an increasing rate due to its medicinal and processing value. Thus, it is considered as one of the valuable kitchen herb in the world market. To fulfill the huge demand for safe and quality plant material, commercial cultivation in hydroponic system has been adopted. At present in Sri Lanka, nutrient solutions are used in hydroponics without assessing the proper nutrient dosage for the individual species and especially for herbs. This experiment was conducted to study the effect of hydroponic nutrient solution concentration on growth and yield of mint and to examine the most economically feasible fertilizer concentration. The experiment was conducted in a plant house using a hydroponic system, trough culture as a Randomized Complete Block Design (RCBD) with four treatments and three replicates. Albert's solution (T1 = 100 % concentration) prepared according to the Department of Agriculture (DOA) recommendation was used as the control and other treatments T2, T3 and T4 were prepared by diluting it further with water. A cost benefit analysis was also conducted. The total dry weight, shoot : root ratio, leaf : stem ratio, Total Soluble Solids (TSS) of plants were measured when the plants were 32, 47 and 64 days old. Plants grown in 50 % concentration of Albert's solution showed the highest growth performance in terms of dry matter accumulation while the lowest performance was shown by the control (T1) plants grown in 100 % concentration. Shoot : root ratio in T3, T4 was significantly higher than in the T1 (control). There was no significant difference between treatments in terms of leaf : stem ratio and brix value. The study revealed that the use of 50 % concentration of Albert's solution for mint cultivation is more biologically and economically suitable than the other concentrations of nutrient solution that were tested for growing mint plants.