

Abstract:

Two leaf vegetables, Pak Choi (*Brassica campestris* L. *chinesis* group) and Chinese kale (*Brassica oleracea* L.), were cultivated using a capillary hydroponics system in greenhouse. A reaping method was introduced for harvesting leaves to reduce labor and other costs. In this method, upper leaves or shoot were reaped off at a specific height, allowing the plants to regenerate new leaves or shoot for successive harvest. Seedlings were transplanted to the systems with 30 liters of 1/2 strength Enshi nutrient solution and leaves or shoot were harvested at a 3-cm height from surface of the substrate every 15 to 20 days for three times. For Pak Choi, average production rates (g FW/plant/d) showed no significant differences among three harvesting times and they were significantly higher than those of plants harvested conventionally. Reaping method can be applied for leafy vegetable production, and suitable duration or height of cutting needed to be investigated. Regardless of plant species, production rates during the second to the third harvest were greater with rice husk charcoal with rice husk top or coconut coir than with the other substrates. For cultivation longer than two months, rice husk charcoal with rice husk top and coconut coir were suitable. We concluded that the harvest method examined in the present study was feasible for leaf vegetable production based on the hydroponic systems.