

**GROWTH AND YIELD PERFORMANCE OF CUCUMBER (*Cucumis sativus L.*)
IN A HYDROPONICS SUB-IRRIGATION SYSTEM UNDER
GREENHOUSE CONDITION**

**EUNICE M. ESTEBAN
MELANIE A. SALONGA**

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ABSTRACT

ESTEBAN, EUNICE MAGBUAL and SALONGA, MELANIE AGMALIW.
Department of Agricultural and Biosystems Engineering, Central Luzon State University,
Science City of Muñoz, Nueva Ecija, May 2023. **GROWTH AND YIELD
PERFORMANCE OF CUCUMBER (*Cucumis sativus L.*) IN A HYDROPONICS
SUB-IRRIGATION SYSTEM UNDER GREENHOUSE CONDITION.**

Adviser: **GLORIA N. RAMOS, M.Sc.**

The study was conducted to determine the most appropriate growing media for cucumber (*Cucumis sativus L.*) production using hydroponics sub-irrigation system. This specifically determined the effects of cocopeat, pumice and rice straw as growing media, on cucumber yield, growth characteristics, and water use efficiency. Simple cost and return analysis was also done to determine the economic viability of the system.

The study was conducted at the CLSU Hydroponics and Aquaponics Technology. The experiment was laid out in a Completely Randomized Design (CRD) with three treatments and three replications. The variety used in the study was Solen F1. There were nine growing beds and each bed contains 12 plants, with a total of 108 plants with 45 samples randomly selected for data gathering. Comparison among means (CAM) was done using Least Significant Difference (LSD).

The result in the effects of growing media revealed that there is no significant difference among treatments in plant height, fruit weight, number of fruits, fruit length and fruit diameter. According to the study, the systems generated a total marketable yield of 113.46 kg. On the other hand, the rice straw's average production cost of PhP 96.49/kg

made it the cheapest compared to cocopeat and pumice. Lastly, the obtained water use efficiency was 24.86 kg/ m³.

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