

**DESIGN, CONSTRUCTION AND EVALUATION OF  
AN A-TYPE DRIP IRRIGATION SYSTEM FOR  
LETTUCE PRODUCTION**

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*Design construction and evaluation of an  
A-type drip irrigation system for lettuce*  
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## ABSTRACT

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The study, "*Development, Construction and Evaluation of an A-type Drip Irrigation for Lettuce Production*", was conducted at the Central Experiment Station of Cavite State University, Indang, Cavite from January 26 to February 24, 2006. The general objective of the study was to develop an A-type drip irrigation system suited for vertical farming.

An A-type drip irrigation system set-up with a 9.62 m<sup>2</sup> floor area was fabricated. Eight 0.18 m x 0.25 m x 3 m planting boxes were positioned from east to west in four layers. The irrigation system was designed to be of gravity type. Seedlings were transplanted to a medium composed of garden soil, carbonized rice hull and compost.

A single factor experiment consisting of four treatments was arranged in Randomized Complete Block Design (RCBD). Each treatment, which represented the layer of the system, was replicated two times. Each replication had 12 seedlings, hence the system had a total of 96 experimental units.

Results showed that the treatments significantly affected the plant's performance in terms of leaf diameter, leaf span and root length, and did not significantly affect the plant height, number of leaves and yield. The uppermost layer produced the greatest leaf diameter and leaf span and the longest roots. Moreover the light intensity in the first layer was significantly different from the upper layers.



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