

**AN URBAN AGRICULTURE APPROACH ON LETTUCE PRODUCTION  
UNDER HYDROPONICS CONDITION**

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**GRETCHEN S. VIDAMO**  
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## ABSTRACT

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The study, An Urban Agriculture Approach on Lettuce Production Under Hydroponics Condition was evaluated at the Old Engineering Building of the Cavite State University, Indang, Cavite from April 10, 2002 to May 4, 2002. The general objective of the study was to evaluate the lettuce production under hydroponics condition.

A Nutrient Film Technique (NFT) set-up with an 8.5-m<sup>2</sup> floor area was fabricated. Twelve 3-inch standard PVC pipes each provided with a 7.9-cm hole were positioned horizontally on a terracing position and were composed of three layers. Four pipes made up each layer, which were placed strategically so that the mid and bottom layers of the system were getting enough sunlight needed for the food production (photosynthesis) of the lettuce. Seedlings were placed on clay pots filled with mixed coco peat and fresh rice hull and were then fitted into the channel holes. The system was operated using a submersible pump.

A single factor experiment consisting of two treatments was arranged in Completely Randomized Design (CRD). The synthetic and organic fertilizer represented Treatments 1 and 2, respectively. Two pipes in each layer represented Treatment 1 and the other two represented Treatment 2. Ten experimental



seedlings were assigned for every replication making an overall total of 120 experimental units or observations.

Results showed that the treatments considered were highly significant on all its relative factors such as its plant height, number of leaves, root length and in its total yield. The use of inorganic fertilizer solution favored the growth and development of the lettuce. It was also noted that appearances of pests were almost none because of the protective structure covering the whole system. Also, results revealed that even when the lettuce plants favored the use of inorganic fertilizer solution rather than the organic fertilizer solution, still, these plants did not put up with the standard weight of lettuce due to extreme heat of the immediate environment passing through the covering.

In general, the performance of the system was not favorable considering the plants growth performance. Only few plants were considered marketable because of several occurrences of dead plants. Thus, the cost and return analysis was not conclusive.



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