DESIGN AND EVALUATION OF LOW – COST HYDROPONICS SYSTEM FOR LETTUCE PRODUCTION

An Undergraduate Thesis
Submitted to the Faculty of the
College of Engineering and Information Technology
Cavite State University
Indang, Cavite

In partial fulfillment
of the requirements for the degree of
Bachelor of Science in Agricultural Engineering

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April 2003

ABSTRACT

CREENCIA RODLEY F., Design and Evaluation of Low-Cost Hydroponics System for Lettuce Production. Undergraduate Thesis. Bachelor of Science in Agricultural Engineering, Cavite State Univesity, Indang, Cavite. April, 2003. Adviser: Engr. Cesar C. Carriaga.

A study was conducted to design and evaluate a low-cost hydroponics system for lettuce production. The study aimed to: a) assess the performance of lettuce grown under a low-cost hydroponics system; and b) conduct a cost and return analysis of the system.

A low-cost hydroponics system with a planting area of 5.4 m^2 was used in the study. The system was composed of three layers which made up the set- up, half for using the foam as holder of the plants and the other half for using the mixed charcoaled rice hull, coir dust, and compost as artificial medium.

Based on the results of the study, it was observed that lettuce grown with foam holder were shorter than those planted with mixed charcoaled rice hull, coir dust and compost as holder. Lettuce grown with mixed charcoaled rice hull, coir dust, and compost as root holder produced more number of leaves, higher yield and had final root length compared to those grown in foam as root holder.

Plants grown in foam as holder has a net income of P –21.99. On the other hand, a net income of P 130.46 was obtained for plants grown in mixed charcoaled rice hull, coir dust, and compost as artificial mediums.

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