

**ORGANIC-BASED NUTRIENT SOLUTION FOR LETTUCE (*Lactuca sativa* L.)
PRODUCTION UNDER PASSIVE HYDROPONICS SYSTEM**

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An undergraduate thesis manuscript presented to the faculty of the Department of
Crop Science, College of Agriculture, in partial fulfillment of the
requirements for the degree of Bachelor of Science in
Agriculture major in Crop Science

**BACHELOR OF SCIENCE IN AGRICULTURE
(Crop Science – Horticulture)**

JUNE 2017

BIOGRAPHICAL SKETCH

The author, Mylene Dela Cruz Tomenes was born on the 19th day of May 1997 at Barangay Sto. Tomas San Jose City, Nueva Ecija. She is the second among the four children of Mr. Larry Tayong Tomenes and Mrs. Ma. Victoria Dela Cruz Tomenes. She was called as “Momay” by her close friends.

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During her college days she joined the Society of Crop Science Majors (SCSM) to gain more friends and boost her social confidence and eventually become auditor for Academic Year 2016-2017.

ACKNOWLEDGEMENT

The author would like to extend her deepest gratitude to all the people who helped her all throughout her college days especially during her stressful phase of life. She is lost with words of how properly compose an acknowledgement message to all the love she received from all of you. Especially to these people:

To her loving adviser, Ms. Joan Agustin-Bayla, who guided her since the day one of their meeting, for being patient in teaching how to do new stuff to her, for reminding her responsibilities, for correcting her wrongs and most of all for believing that she can do everything as long as she is willing to learn, although sometimes she is stubborn.

As well as, to her critic, Dr. Rosemarie T. Tapic, who helped her in editing her paper, to Prof. Pacifico T. Vizmonte Jr., for being always helpful and wishing all her best, to Dr. Ronaldo T. Alberto, College Research Coordinator and Mr. Efrelyto Jay Guittap for allowing her to use the department's equipment, and to all faculty and staff of Department of Crop Science. The author would like to extend her sincerest thanks for the time and effort in giving comments and suggestions for her paper.

To her tropang tots, Carla Jane "dyosa", Jamie, Normylyn, Trixie "cute", Veron, Ethel, Dhyna for their encouraging words when the author feels down and devastated and for being the best bullies in her life.

To her wapets friends, Liezel, Rose Ann, Kim, Alyssa, Roma, Janella, Ate Kim and Daves who stay with during her 1st year college until now.

To her friendships, Ate Mirasol, Ate Angge, Ate Roselyn, Dianne, Maye, and Vladimir for being always there and for being her new set family.

To her pretty girls, Julie “ganda”, Angelica Rose “Gel” and Christine “Tin” who were always there to support and bully the author.

To Hyancynth “yanyan”, Ariel and Jamaica for giving her moral support and for cheering her up in her down moments.

To his brothers and sisters in the Society of Crop Science Majors (SCSM), to their adviser, officers and alumni.

To her parents, Mr. Larry Tomenes and Mrs. Ma. Victoria Tomenes for their moral and financial support to finish her degree, to her siblings’ kuya Mark, Michael and Agnes for always being there at her side and to her Tita Ating and Tito Eddie together with their daughter ate Eden for giving financial support to the author’s whole family to finish her schooling.

And lastly, to those person who were failed to mention, the author extended her never ending thank you, because you stayed with her in ups and downs of her life. To all of them, this humble work is heartily dedicated.

MYLENE DELA CRUZ TOMENES

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by

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ABSTRACT

Growing of lettuce using hydroponics system is increasing nowadays. However, the production is limited by the availability and high cost of inorganic nutrient solution. Alternatives to inorganic nutrient solutions such as organic-based solutions were tested in this study under passive hydroponics system. The following treatments were evaluated: 50% fish amino acid (FAA), 100% FAA, 50% fermented plant juice (FPJ), 100% FPJ, 50% vermicompost tea (VCT), 100% VCT, recommended rate of inorganic nutrient solution (INS) and water (Control). Lettuce was grown for 30 days in styrofoam boxes maintained with 7 cm depth of nutrient solutions.

Application of INS, 50% and 100 % VCT significantly improved plant height, number of leaves, width of leaves, weight of lettuce, yield per box, chlorophyll and dry matter content than the water treatment. In addition, these treatments had better sensory and postharvest characteristics than the lettuce applied with water alone. The use of FAA and FPJ at 50% and 100% concentration on the other hand produced retarded growth and early senescence of lettuce plant. For economic purpose VCT at 50% is recommended in this study as potential alternative to inorganic nutrient solution.

¹ / An undergraduate thesis manuscript submitted to the faculty of Department of Crop Science, College of Agriculture as partial fulfillment of the requirements for the degree of Bachelor of Science in Agriculture Major in Crop Science from Central Luzon State University, Science City of Muñoz Nueva Ecija, prepared at the Department of Crop Science under the supervision of Ms. Joan Agustin-Bayla with Research Contribution No. CA-04-16-0012

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