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GROWTH AND YIELD PERFORMANCE OF TOMATO  
AND THREE LEAF VEGETABLES IN THE INTERCROP  
AND MONOCROP SYSTEMS

T H E S I S

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**GROWTH AND YIELD PERFORMANCE OF TOMATO AND THREE  
LEAFY VEGETABLES IN THE INTERCROP  
AND MONOCROP SYSTEMS**

**Undergraduate Thesis  
Submitted to the Faculty of the  
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*Growth and yield performance of tomato and  
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## ABSTRACT

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The growth and yield performance of tomato and three leafy vegetables in the intercrop and monocrop systems was evaluated at Sitio Calo, Kaylaway, Nasugbu, Batangas from October 2002 to February 2003. The study aimed to determine the growth and yield performance of tomato, pechay, mustard, and lettuce in the intercrop and monocrop systems. Four treatments were used for tomato while six treatments were used for leafy vegetables. Each of the treatments for all crops was replicated three times.

Transplanting of tomato and the three leafy vegetables (pechay, mustard, and lettuce) was done October 19, 2002 at a distance of 50 cm x 50 cm for intercropped and monocropped, 10 cm x 10 cm for leafy vegetables in the monocrop and 15 cm x 15 cm as intercrop with tomato. Based on the results of the study, rapid growth was observed in the treatment where tomato was planted alone (T1) and stunted growth and yellowing of leaves was observed in the treatment where tomato was intercropped with the leafy vegetables. During the early vegetative phase the three leafy vegetables (pechay, mustard and lettuce), were uniform in growth and vigor. However, five days after transplanting, marked differences were noticed in all treatments.

The results revealed that tomato intercropped with different leafy vegetables produced more fruits. It was noted that intercropping tomato with leafy vegetables did not affect the yield as to the tomato fruits produced per plant and harvested leafy vegetables.

No significant differences was observed on the number of days from transplanting to flowering, flowering to fruit setting, fruit setting to maturity, plant height, number of branches per plant, number of fruits per plant, weight of non- marketable fruits, in all cropping combinations. A significant difference on the average weight of marketable fruits per plant was noted. Average weight per plant, number of plants per kilogram and average of plant per plot of leafy vegetables was likewise significantly different.

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# **GROWTH AND YIELD PERFORMANCE OF TOMATO AND THREE LEAFY VEGETABLES IN THE INTERCROP AND MONOCROP SYSTEMS <sup>1/</sup>**

**Ma. Lea G. Rosel**

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<sup>1/</sup> An undergraduate thesis presented to the Faculty of the Department of Crop Science, College of Agriculture, Forestry, Environment, and Natural Resources Cavite State University Indang, Cavite in partial fulfillment of the requirements for graduation with the degree of BSA Major in Farming Systems. With Contribution No. \_\_\_\_\_. Prepared under the supervision of Dr. Simeon S. Crucido.

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## **INTRODUCTION**

Vegetable is one of the most important crops of the Filipinos (Bautista, 1977 as cited by Marudo, 1997). Aside from being a short season crop, it contains high amount of protein and other essential elements. In the Philippines, vegetable farming could be intensified and the farmers can be made more productive and profitable by improving technologies (Ocampo, 1999). While the country has varied climate and geography, it favors the cultivation of a wide range of vegetable crops and allow the specialization in the production of more economically important vegetables (AVRDC, 1988). Intercropping, the system of growing two or more crops at a time in the same piece of land (Anciro, 1990) and monocropping, the growing of one crop, harvesting it, and then planting another crop in the same space are examples of practices which contribute to increases in production per unit area of land. Except in dry land areas, the garden could