

**EMPIRICAL DETERMINATION OF THE YIELD RESPONSE
FACTOR OF LETTUCE AND SPINACH**

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An Undergraduate Thesis
Submitted to the Faculty of the
College of Engineering and Information Technology
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00005063

Empirical determination of the yield
response factor of lettuce and spinach
635.52 V44 2005
T-3204

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November 2005

ABSTRACT

VASQUEZ, LAURENCE C. Empirical Determination of the Yield Response Factor of Lettuce and Spinach. Undergraduate Thesis. Bachelor of Science in Agricultural Engineering. Cavite State University, Indang, Cavite. November 2005. Adviser: Prof. Conrado M. Baltazar.

The study *Empirical Determination of the Yield Response Factor of Lettuce and Spinach* was conducted at Mabulo, Naic, Cavite from December 2004 to January 2005. The study aimed to: (a) determine the yield response factors of lettuce and spinach; (b) analyze the effect of soil moisture content on the yield response factor.

The study used ten levels of soil moisture content as treatments. The treatments were: T1(5-15%FC), T2(15-25%FC), T3(25-35%FC), T4(35-45%FC), T5(45-55%FC), T6(55-65%FC), T7(65-75%FC), T8(75-85%FC), T9(85-95%FC), and T10(95-100%FC). The study was arranged in Completely Randomized Design (CRD). Analysis of Variance (ANOVA) was used to determine if there were significant differences among treatments. Duncan's Multiple Range Test (DMRT) was used to determine which among the treatments were significantly different with each other.

Spinach grown in T7(65-75%FC) and T8(75-85%FC) attained the lowest yield response factor (k_y) values of 0.86 and 0.69, respectively. Both treatment attained a higher yield compared to other treatments. Spinach grown in T1(5-15%FC), T2(15-25%FC), T3(25-35%FC), T4(35-45%FC), T5(45-55%FC), T6(55-65%FC), T9(85-95%FC), and T10(95-100%FC) had k_y values of greater than 1. Under conditions of limited water, the crop with the higher k_y value will suffer a greater yield loss than the crop with a lower k_y value (FAO, 2000).

Statistical analysis revealed that the k_y values of spinach was significantly affected by different levels of moisture content. The study revealed that yield response factor (k_y) of spinach planted in 5-95% FC were not significantly different but were significantly lower than those spinach planted in 95-100% FC.

Lettuce grown in T9(85-95%FC) and T10(95-100%FC) attained the lowest k_y values of 0.85 and 0.60, respectively. Lettuce grown in T1(5-15%FC), T2(15-25%FC), T3(25-35%FC), T4(35-45%FC), T5(45-55%FC), T6(55-65%FC), T7(65-75%FC), and T8(75-85%FC) has k_y values of greater than 1.

Statistical analysis revealed that the yield response factor k_y of lettuce was not significantly affected by the different levels of soil moisture content.

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