

EFFECTS OF ORGANIC FERTILIZER ON THE GROWTH AND YIELD OF LETTUCE (*Lactuca sativa L.*) USED AS VEGETABLES

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ABSTRACT

The study was conducted to observe the effects of different organic fertilizers on the growth and yield of lettuce in the field conditions during the period from October 2011 to January 2012. The experiment was performed by randomized block design consisted of four factors as well as control (without fertilizer), poultry manure (chicken litter), cattle manure (cow dung) and commercial fertilizer. Under these four factors, eight treatments namely T₀ (control); T₁, T₂ and T₃ (10, 20, 30 tons/ha of poultry manure, respectively); T₄, T₅ and T₆ (15, 25, 35 tons/ha of cattle manure, respectively); and T₇ (10 tons/ha commercial fertilizer), with three replications were applied. The studies revealed that the highest production of lettuce was obtained by using eco-friendly organic fertilizer followed by commercial fertilizer than control one. The average maximum number of leaves, root length and yield per plot were observed by using cow dung in T₆, while the lowest in T₀. The chicken litter fertilized plants had relatively higher average leaves length, leaves breadth and base diameter; while the maximum dry matter content and yield per hectare were found by applying cow dung in T₅. The highest gross return of BDT 1168800/ha and net return of BDT 683229/ha with the benefit cost ratio of 1.40 was obtained from T₅. From the economic point of view, it is concluded that T₅ was the best dose of fertilizer for maximizing the growth and yield of lettuce.

KEY WORDS: Organic farming, Treatment, Production, Net return.