GROWTH PERFORMANCE OF LETTUCE AS INFLUENCED BY DIFFERENT TYPES OF DRIED BIOGAS SLUDGE AS SOIL ADDITIVES

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ABSTRACT

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The main objective of the study was to determine the effects of different types and levels of dried biogas sludge as soil additives to the growth performance of lettuce. Specifically, the study aimed to: 1) evaluate the growth performance of lettuce using dried biogas sludge of poultry manure as soil additives; 2) evaluate the growth performance of lettuce using dried biogas sludge of swine manure as soil additives, and; 3) compare the growth performance of lettuce supplemented with different levels and types of dried biogas sludge to the lettuce without supplementation in terms of: number of leaves, height of plant, length of roots, and weight of the plant.

Significant findings showed that there was significant relationship between the effects of dried biogas sludge from poultry and swine manure as soil additives and the growth performance of lettuce in terms of height and weight, and no significant effect in terms of the number of leaves and length of the roots.

Among different types and levels of dried biogas sludge, Treatment A2B2, supplemented with 25% amount of dried biogas sludge from swine manure exhibited the best performance in terms of height and weight of the lettuce; highest number of leaves was attained at Treatment A2B5, while the longest roots were obtained from the treatment without supplementation of dried biogas sludge.