

# THE EFFECT OF VARIATIONS IN CONSUMPTION OF ORGANIC WASTE ON MAGGOT GROWTH

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## ABSTRACT

Organic waste was a waste that can be easily decomposed. It usually comes from the wasted of food scraps. The dominance of the organic waste needs to get proper management, so the waste can be handled properly and does not have a bad impact on the surrounding environment. One example of this form of management is the bioconversion method. Bioconversion was the process of decomposition of waste with the help of microorganisms such as fungi, yeast, bacteria, and larvae. Maggot is the larva of the Black Soldier Fly which has the ability to reduce waste mass 52%-56% so that it can help the bioconversion process. The purpose of this study was to analyze the effect of organic waste consumption on the growth of Maggot.

This type of research was a quasi-experimental research with a one group post test design. The object of research was maggot with the age of 6 days. The treatment group consisted of vegetable waste, fruit waste, and fish waste. The study was conducted for 13 days. The data were processed and analyzed using Kruskal Wallis analysis.

The results of the Kruskal Wallis test showed that  $p > 0.05$ , so there was no difference in the variation of organic waste consumption on the growth of maggot. Fish waste treatment resulted in an average weight of maggot aged 18 days of 765 grams and an average protein content of maggot aged 18 days of 36.35%. The treatment of vegetable waste resulted in the highest average moisture content of maggot aged 18 days of 6.19%.

The conclusion in this study was that there was no significant difference in the effect of variations in organic waste consumption for maggot growth. Further research was recommended to use organic waste with appropriate moisture content such as leftover rice and estimate the amount of maggot used with the size of the breeding container.

Keywords : Organic waste, Black Soldier Fly, Maggot