STUDY OF UTILIZATION OF TOFU WASTE FOR FERTILIZER (STUDY CASE OF TOFU FACTORY KENJERAN)

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Abstract

Tofu waste has been very detrimental to the environment. Even levels of BOD and COD tofu waste exceeds the quality standard. Though there is an economic potential of tofu waste as fertilizer. Tofu waste still contains the essential elements for plants such as N, P and K. According to the previous studies of tofu waste can be utilized elements of N, P, and K. Therefore, in this research limit the study only on that three elements.

Previous studies of the tofu waste is the addition of EM4 and testing on plants microalgae. In addition, there are also studies that tested the tofu waste on mustard, rice plant and others. However, until now there has been research on tofu waste who piloted Watercress, Chilli and Melon.

The researcher tested the organic liquid fertilizer from tofu waste with the test plant Watercress, Chilli and Melon. Because in addition to the two plants are potentially useful as a food, also because both the economical value is very high.

The method used for this first study was to test the levels of N, P, K and pH of the tofu waste. Tofu waste itself is very sour and less than optimal for plant growth. Therefore, the researcher raise the pH to 6. This is in accordance with the terms of organic liquid fertilizer and the pH optimum for both the test plants. Increased pH is done by adding NaOH.
Then the waste that has had a varied pH 6 the concentration of 0%, 25%, 50%, 75% and 100%. Furthermore, the data were analyzed with a curve graph of stem height and number of leaves versus days graph at each concentration by statistical methods. Based on statistical method, T-Test, that compares each of the two plants with different concentrations, varying the concentration of tofu waste affects plant growth test.

Based on the typical composition of domestic tofu waste, the content of the waste into the category of high. By watering twice as much waste. Watercress is growth the best on 100% concentration. As for Melon is 50% with watering thrice. Especially for chili, this plant suffered death on the second flush waste. Actually chili poured waste concentration of 50% showed the best growth. However, due to be watered for the second time, this chili death. Chilli flushing waste as much as 50% and 100% death, as well as chili poured 75% had tumbled down when the flushing of waste for the second time. Therefore, the chili can grow optimally with a concentration of 50% but only watered once.

Key search: Tofu waste, Liquid Fertilizer, Watercress, Melon, Chilli