

ABSTRACT

THE EFFECT OF DOSAGE AND FREQUENCY OF LIQUID ORGANIC FERTILIZER (POC) MIXED TEMPE INDUSTRIAL WASTE AND PAPAYA FRUIT WASTE ON THE GROWTH AND PRODUCTION OF KAILAN (*Brassica oleracea* Var. *Alboglabra*)

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Tempe industrial liquid waste is a waste from the tempe processing process which is generally discharged into the surrounding environment, especially into waters or into rivers which can cause environmental pollution. Papaya fruit waste is a waste material that is usually disposed of in open dumping without further management, it will cause environmental disturbances and unpleasant odors. Therefore, to reduce the impact of environmental pollution, it is necessary to utilize waste by using it as an ingredient for making liquid organic fertilizer. This study aims to determine the interaction between the dose and frequency of application of liquid organic fertilizer (POC) from tempe industrial waste and papaya waste and to determine the best dose and frequency of application on the growth and yield of kailan (*Brassica oleracea*). This study used a randomized block design (RBD) with a factorial pattern of three times. The first factor is the dose of POC from tempe industrial waste and papaya fruit waste which consists of 3 levels, namely: 0 ml of plants of application, 10 ml of plants of application and 20 ml of plants of application and the second factor is the frequency of giving POC of tempe industrial waste and papaya fruit waste which consists of 3 levels, namely : 3 times of administration, 6 times of administration and 9 times of administration. The data were analyzed using variance with un F and continued with Duncan's Multiple Range Test with 5% significance level. The results of the analysis showed that there was no interaction between the dose of POC from tempe industrial waste and papaya fruit waste on the parameters of plant height, number of leaves, leaf area, root shedding ratio, wet weight per plant and wet weight per plot. However, independently the frequency factor of giving POC of tempe industrial waste and papaya fruit waste had an effect on the parameters of plant height, leaf area, wet weight per plant and wet weight per plot. Frequency of 3 times POC application of tempe industrial waste and papaya fruit waste had a better effect on growth and result of kailan.

Key words :Kailan, Papaya Fruit Waste, Tempe Industrial Waste