

**POTENSI EKSTRAK TANAMAN TERFERMENTASI DARI LIMBAH KELAPA MUDA
(*COCOS NUCIFERA* L) SEBAGAI PUPUK DAN PESTISIDA ALAMI PADA
TANAMAN KANGKUNG (*IPOMOEA REPTANS* POIR)**

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ABSTRACT

POTENCY OF REFERENCED PLANT EXTRACTS FROM YOUNG COCONUT WASTE (*COCOS NUCIFERA* L.) AS A FERTILIZER AND NATURAL PESTICIDES IN KANGKUNG (*IPOMOEA REPTANS* POIR)

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Fermented Plant Extract (FPE) is the result of plant fermentation by utilizing the EM4 bioactivator and brown sugar as an additional source of microbes. This study aims to see the potential of young coconut waste as a natural fertilizer and pesticide by fermentation process so it is produced the FPE. The parameters analyzed is variation fermentation time. Methods of analyzing the macro content of N, P, K and C-Organic respectively using Methods of Kehjdal, AAS, UV-Vis Spectrometer. Analysis of secondary metabolite compounds conducted by using phytochemical tests. From the result of analysis the selection of waste the variation fermentation time which is optimum volume of EM4 was obtained at 45 mL with N, P, K and C-organic values 0.858%, 0.0324%, 2.832%, and 2.090%. While the optimum time of fermentation is for 4 weeks with values of N, P, K and C-organic 1.044%, 0.0367%, 4.283%, and 1.728%. The results of secondary metabolite compounds test with phytochemicals showed that the samples contained tannins and alkaloids and the presence of organic acids. The resulting FPE was applied to the ground of kangkung plants for 30 days of observation with the growth test parameters of stem height, leaf number, plant pest attack. Treatment of FPE was compared with no FPE. The best kangkung growth was seen in the application of fermentation of FPE for 4 weeks. The soil used as media of kangkung plants was analyzed and obtained of 0.41% N, 0.05% P, and 1.83% K.

Keywords: *Young Coconut Waste, FPE, EM-4, Kangkung Plants (Ipomoea reptans P).*