

# ***THE EFFECT OF COW URINE LIQUID ORGANIC FERTILIZER ON THE GROWTH OF PALM PALM SEEDLINGS (*Elaeis guineensis* Jacq.) IN PRE NURSERY***

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## ***ABSTRACT***

*The main factor that influences oil palm productivity is the use of quality seeds. Good seeding, including the right type of fertilizer, time, dose and method, determines the success of oil palm cultivation. The use of liquid organic fertilizer, one of which is cow urine, can improve the chemical, physical and biological properties of the soil and provide the nutrients needed by plants. The aim of the research was to determine the effect of giving cow urine liquid organic fertilizer on the growth of oil palm seedlings in the pre-nursery. The research was carried out from September to December 2024 at the Jember State Polytechnic research area. The experimental design used in this research was RAK (Randomized Block Design) Non-Factorial using 1 factor, the first factor was the concentration of cow urine liquid organic fertilizer (P) with concentration (P0) without concentration treatment, (P1) Concentration 15% (150 ml POC cow urine + 850 ml water ), (P2) Concentration 30 % (300 ml POC cow urine + 700 ml water ), (P3) Concentration 45 % (450 ml POC cow urine + 550 ml water). So there are 4 levels of treatment, each treatment consists of 6 replications. Each experimental unit consists of 5 seeds. Observation parameters in the study included seed height, seed diameter, number of leaves, fresh weight of seedlings and dry weight of seedlings. The results of the treatment research concluded that the effect of giving cow urine liquid organic fertilizer with a concentration of 30% (300 ml POC cow urine + 700 ml water) had a significant effect on the growth of oil palm seedlings, had a significant effect on the growth of the number of leaves at 12 WAP and had no significant effect on height parameters. plants, seed diameter, wet weight, dry weight.*

***Key words:*** oil palm, liquid organic fertilizer, pre nursery, cow urine