

EFFECTIVENESS OF STERILIZATION TECHNIQUE ON OIL PALM LEAF EXPLANTS (*Elaeis guineensis* Jacq) DXP SIMALUNGUN VARIETY IN VITRO

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ABSTRACT

Oil palm commodity (*Elaeis guineensis* Jacq) is one of the largest vegetable oil producing plants besides soybean seeds, sunflower seeds and coconut oil. Due to the good prospects, the farmers want to increase the productivity of oil palm plantations. However, the provision of superior and quality seeds is a problem. One good alternative to overcome this problem is the need for vegetative propagation through tissue culture techniques. This study aims to determine the effectiveness of the sterilization technique on leaf explants of the oil palm variety DXP Simalungun (*Elaeis guineensis* Jacq) in vitro which was carried out from February to March 2023 at the Tissue Culture Laboratory of the Jember State Polytechnic. The experimental design used for this study was a Non-Factorial Completely Randomized Design (CRD) consisting of 4 treatments. Each treatment consisted of 10 replications, each replication consisting of 1 bottle containing 1 explant. The treatments used were treatment A (70% alcohol; 0.1% HgCl₂, 2 g/l ascorbic acid; 2% NaOCl + 0.1 g/l fungicide), B treatment (10% NaOCl; 80% alcohol; HgCl₂ 0.1%) treatment C (HgCl₂ 0.03%; NaOCl 2%; Alcohol 50%) and treatment D (70% alcohol; bayclin 10%; bayclin 20%). From the results of research conducted that treatment D showed the best results on all observation parameters used.

Keywords: Explants, Sterilization, Oil Palm