

**Effect of Sterilization Technique and Clone Type on Sterilization
Cocoa Young Leaf Explants (*Theobroma cacao* L.)
in Tissue Culture
Supervisor Rahmawati, S.P., M.P.**

**Rijal Daivu Duri
Plant Plantation and Cultivation Study Program
Agriculture Production Department**

ABSTRACT

*Cocoa (*Theobroma cacao* L.) is a prima donna plantation commodity in Indonesia. One of the ways to obtain good quality cocoa seedlings is through tissue culture techniques. However, this technique often encounters obstacles at the sterilization stage. Especially if the explants are from plantation crop commodities such as cocoa. The goal of research was to determine the effect of sterilization techniques and clone types on the sterilization of young cocoa leaf explants by tissue culture. This research used a Completely Randomized Factorial Design (RALF) which consisted of 2 factors and held from July to October 2022. Research data were analyzed using Analysis of Variance $\alpha = 5\%$. If the results are significantly different or very significantly different, it will be further tested using the DMRT level of 5%. The results showed that the use of the 5th sterilization technique gave the best results on the parameter percentage of explants that were not contaminated (77,78%) and the use of DR 2 cacao young leaf explants gave the best results on the percentage parameter of explants that were not contaminated (73,33%). And the interaction between the S3K3 treatments gave the best results in the percentage parameter of explants experiencing growth (100%) and the interaction between the SIK1 treatments gave the best results in the percentage parameter of explants experiencing browning (11,11%).*

Keywords: *sterilization technique, clone type, tissue culture*