

***THE EFFECT OF NATURAL ZPT ADMINISTRATION ON
THE GROWTH OF CACAO STEM CUTTINGS
CACAO (*Theobroma cacao* L.) FROM
PLAGIOTROPIC CLONAL COCOA
(PCC) SULAWESI CLONE 01***

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ABSTRACT

*Cocoa (*Theobroma cacao* L.) is one of the plantation products that has a very high economic value. Cocoa productivity has decreased every year. In 2019, cocoa productivity in Indonesia was 734,795 thousand tons and has decreased every year until 2022, cocoa productivity was 650,612 thousand tons. To overcome this, it is necessary to rejuvenate plants and provide superior planting materials. Cuttings are a technique used to grow parts or pieces of plants into new plants. The success of plant propagation through cuttings depends on the ability of the cuttings to form roots. Efforts to encourage root formation in cuttings can use auxin group plant growth regulators. This study aims to determine the effect of natural ZPT concentration on cocoa stem cuttings from Plagiotropic Clonal Cocoa (PCC) clone Sulawesi 01. This study was conducted in August 2024-January 2025 on the land of the Jember State Polytechnic. The experimental design in this study was a non-factorial Randomized Block Design (RAK) consisting of 9 treatment levels, namely, P0 as control, P1 bean sprout extract concentration 20%, P2 bean sprout extract concentration 40%, P3 bean sprout extract concentration 60%, P4 bean sprout extract concentration 80%, P5 coconut water concentration 20%, P6 coconut water concentration 40%, P7 coconut water concentration 60%, P8 coconut water concentration 80%. This study was conducted with 3 replications and 9 treatments on 2 experimental samples. The results of this study indicate that the administration of natural ZPT in the P8 treatment (coconut water concentration 80%) obtained very significant different results on the parameters of the percentage of shoot length life 90 HST, 120 HST, 150 HST, and root length 150 HST.*

Keywords: *Cocoa, Plagiotropic Clonal Cocoa, Natural Plant Growth Regulator*