

***Comparison Of Synthetic and Natural PGR Against
Growth of Robusta Coffee Cuttings
(Coffea canephora L.) BP Clone 308***
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ABSTRACT

Robusta coffee is one of the most widely grown types of coffee in Indonesia. Cuttings are an alternative method for obtaining seedlings in a relatively short period of time. The challenge with the cutting method is in the formation of shoots and roots. Rootone-F plant growth regulator and red onion extract were applied to stimulate the growth of coffee cuttings. This study aims to determine the comparison between synthetic and natural plant growth regulator, as well as to identify the effective of synthetic and natural plant growth regulator to support coffee cutting growth. The research was conducted from May to October 2025 at the Seed Technology Field of the Jember State Polytechnic. The research design used a non-factorial randomized block design consisting of 5 treatments and 5 replicates, resulting in 25 experimental units. The treatments included Control (S0), 50% red onion extract (S1), 100% red onion extract (S2), Rootone-F 200 ppm (S3), and Rootone-F 400 ppm (S4). Data analysis using ANOVA and orthogonal contrast tests. The results showed that synthetic and natural plant growth regulator had a significant effect on the number of leaf pairs of 2 months after planting, and synthetic plant growth regulator showed better results than natural plant growth regulator. In the comparison of natural plant growth regulator, red onion extract at a concentration of 100% was effective and had a significant effect on increasing the number of leaf pairs of 2 months after planting.

Keywords: *Cuttings, Robusta Coffee, Rootone-F, Shallot Extracts*