**EFFECT OF IAA AND NAA SOLUTION ON THE GROWTH OF ROBUSTA COFFEA (*Coffea canephora* Pierre ex Froehner)**

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**ABSTRAC**

Coffee is one of economic important plants in Indonesia. In the development of robusta coffee, it requires the availability of sufficient robusta coffee seedlings. Robusta coffee plants are generally propagated vegetatively, one of which is by cutting techniques, but this cutting technique has a weakness that is the difficulty of forming adventitious roots. In this study, growth regulators will be used which can stimulate the formation of adventitious roots by the application of IAA and NAA auxins with various concentrations. This study aims to determine the effect of the application of IAA and NAA solutions with various concentrations on the growth of the single node cutting of the robusta coffea. The study was conducted at the research field located in Labuhan Ratu District, Bandar Lampung from January to May 2019. The tools and materials used were IAA and NAA auxin powder, 50% ethanol, soil, sand, transparent plastic, orthotropic branch Robusta coffea, stationery and cameras. This study uses a single complete randomized design (CRD) with 8 treatments. The treatments tested were IAA with 4 levels (0, 5, 10.15 mM) and NAA with 4 levels (0, 5, 10.15 mM), each treatment was repeated three times. The data obtained were tested for homogeneity of variance using the Barlett test, if the assumptions were met the data were analyzed for variance and the difference in the middle value was tested with the least significant difference test (LSD) at the 5% level.

The experimental results show (1) IAA and NAA auxin application on the single node cutting of the robusta coffea can increase the number and length of primary roots as well as the wet weight and root dry weight, but it does not affect the growth of shoots such as shoot length, number of shoots, number of leaves and shoots ; (2) The best auxin concentrations for cutting roots are IAA 15 mM and NAA 5 mM. This shows that NAA auxin is more effective than IAA auxin. (3) IAA concentration which increases from 5 to 15 mM causes the number and length of primary roots to increase and the wet and dry weight of roots, while increasing NAA concentration from 5 to 15 mM actually decreases the number of roots, primary root length, weight wet and root dry weights on the single node cutting of the robusta coffea

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