THE EFFECT OF VARIOUS CONCENTRATION OF INDOLE ACETIC ACID (IAA) AND INDOLE BUTYRIC ACID (IBA) ON ROOTING CAPACITY OF PINEAPPLE (Ananas comosus L.) VAR. MD2: A RESEARCH

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Final Year Project Report Submitted in Partial Fulfilment of the Requirements for the Degree of Bachelor of Science (Hons.) Technology and Plantation Management in the Faculty of Plantation and Agrotechnology Universiti Teknologi MARA

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#### ABSTRACT

## THE EFFECT OF VARIOUS CONCENTRATION OF INDOLE ACETIC ACID (IAA) AND INDOLE BUTYRIC ACID (IBA) ON ROOTING CAPACITY OF PINEAPPLE (Ananas comosus L.) VAR. MD2 : A RESEARCH

Pineapple, or Ananas comosus has been discovered as a new source of wealth in plantation industry. Nowadays, MD2 variety pineapple are being trade globally because of its sweetness, attractive golden skin, and having a very good taste among other pineapple varieties. While MD2 pineapple is very popular among consumer demands, there is issue about the shortage supply of planting material of MD2 pineapple. The issue occurs because of high demand of variety of MD2 pineapple planting materials. Current research about propagation of MD2 pineapple technique also still cannot solve the shortage of MD2 pineapple. Studies has been conducted to find alternative to increase the efficiency in producing MD2 pineapple material plants by finding the effect of having different concentration of combination of IAA IBA on rooting capacity of Ananas comosus L. var. MD2 at 0.0, 0.5, 1.0, 1.5, 2.0, and 2.5 mg/L. Experiment started by sub culturing shootlets of MD2 pineapple into solidified Murashige and Skooge (MS) medium supplemented with different combination concentration of IAA and IBA at 0.0, 0.5, 1.0, 1.5, 2.0, and 2.5 mg/L. The cultures were then incubated at 25°C under 16 hours' photoperiod at 30 °C and fluorescent lamp. After 4 weeks' incubation, the root percentages (%), root length (cm) and root number were recorded. Result shows that different combination concentration of IAA and IBA gave various effect on rooting capacity of Ananas comosus var. MD2. Concentration of 0.0 mg/l of IAA and IBA gave the highest root length (3.02 cm), while having concentration of 1.0 mg/L of IAA and IBA produces the highest root number (12.50) and also all of the explant gave (100.00%) of root percentages. It can be concluded that treatment with IAA and IBA does enhance rooting capacity of Ananas comosus L. var. MD2.

Keywords : pineapple, indole acetic acid, indole butyric acid, rooting capacity