IN VITRO REGENERATION OF PINEAPPLE (*Ananas comosus*) L. MERR 'MD2' USING DIFFERENT CONCENTRATION OF INDOLE ACETIC ACID (IAA) AND KINETIN (KN) HORMONE

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DECLARATION

This Final Year Project is a partial fulfilment of the requirements for a degree of Bachelor of Science (Hons.) Technology and Plantation Management, Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA.

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I hereby declare that I have checked this project and in my opinion, this project is adequate in term of scope and quality for the award of the degree of Bachelor of Science (Hons.) Technology and Plantation Management, Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA.

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ABSTRACT

In vitro regeneration of *Ananas comosus* L. Merr. 'MD2' (pineapple) was carried out using MD2 pineapple sucker as explant. *In vitro* regeneration was done by manipulating the combination of plant growth regulator between Indole Acetic Acid (IAA) and Kinetin (Kn). Eleven different combination of IAA and Kn hormone was applied in MS medium with vitamins supplemented with 8.0g/L agar and 30g/L sucrose at combination of different concentration of IAA (0.00, 0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45 and 0.5 mg/L) and Kn (0.0, 0.50, 1.00, 1.50, 2.00, 2.50, 3.00, 3.50, 4.00, 4.50 and 5.00 mg/L) respectively and maintain at 25^0C under 16 hours of photoperiod. The result shows that the sucker explant able to induce shoot proliferation on different combination of IAA and Kn. Optimum regeneration for the best result was obtained from MS medium supplemented with 0.35mg/L IAA and 3.50mg/L Kn. Shoot proliferation start undergo morphogenesis after 2 to 3 weeks culture on MS medium. In addition, this combination of plant growth regulator regenerated highest mean for the number of shoot regenerate per explant (2.98unit), the length of shoot (0.82cm), height of plantlet (1.01cm) and the weight of plantlet (1.42g) compared to other combination of IAA and Kn tested. However, all the explant showing different respond towards treatment given.