

UNIVERSITI TEKNOLOGI MARA

**THE IMPACT OF DIFFERENT
CONCENTRATIONS OF
GIBBERELIC ACID (GA₃) ON
SEEDLING GROWTH PERFORMANCE
OF COCOA (*Theobroma cacao*)**

ROSZALIA BINTI ABU BAKAR

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Name of Candidate	ROSZALIA BINTI ABU BAKAR
Candidate's ID No	2012614814
Programme	Bachelor of Science (Hons.) Plantation Technology and Management
Faculty	Plantation and Agrotechnology
Title	The Impact of Different Concentrations of Gibberellic Acid (Ga_3) On Seedling Growth Performance of Cocoa (<i>Theobroma Cacao</i>)
Signature of Candidate	
Date	5 th JANUARY 2015

ABSTRACT

Dormancy is a condition where the seeds unable to germinate even in a specified period of time even in the most favourable environmental conditions. Seed germination is predisposed by the environmental factors such as water, temperature, oxygen, chemicals and light conditions. In order to determine the effective Gibberellic Acid (GA_3) concentrations as treatment to break cocoa seed dormancy in cocoa seed and to evaluate the effect of Gibberellic Acid (GA_3) treatment on growth performance of cocoa seedlings, an experiment was conducted with 6 replications for each concentrations of Gibberellic Acid (GA_3) in a completely randomized design. Cocoa seeds were subjected to different treatments of Gibberellic Acid (GA_3) in different concentrations, embryo test, cutting by scalpel, soaking with 7% of sodium hypochlorite, sodium hypochlorite, cocoa seed soaked with different concentration of Gibberellic Acid (GA_3) at (100, 200, 300, 400, 500 mgL⁻¹) for a period of 24 hour. Results showed concentrations does have slight effect, with the highest test dose showing better growth in all the parameters but it is not significant statistically.

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