A REVIEW: PROTOPLAST ISOLATION BY USING DIFFERENT EXPLANT

NURUL HUDA BINTI MUSTAFA

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

JULY 2016

DECLARATION

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

It is entirely my own work and has not been submitted to any other University or higher education institution, or for any other academic award in this University. Where use has been made of the work of other people it has been fully acknowledged and fully referenced.

I hereby assign all and every rights in the copyright to this Work to the Universiti Teknologi MARA ("UiTM"), which henceforth shall be the owner of copyright in this Work and that, any reproduction or use in any form or by any means whatsoever is prohibited without a written consent of UiTM

Candidate's signature : Date: JULY 2016

Name: NURUL HUDA BINTI MUSTAFA

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

Signature:

Name of Supervisor: NOER HARTINI BINTI DOLHAJI

Position: LECTURER

Date: JULY 2016

ACKNOWLEDGEMENTS

Alhamdulillah. Firstly, all praise to Allah, I am able to complete my thesis for the final year project with a bright color.

My deepest appreciation to my supervisor, Madam Noer Hartini Binti Dolhaji for the cooperation in terms of time, support, advices and guidance throughout the time I was placed under her responsibility. It is such a great honor to be one of her students and be able to do my final year project under her supervision.

I also wanted to express much appreciation to my reviewer, Madam Wan Zuraida Binti Wan Mohd Zain who are willingly helping and guiding me during the presentation and reviewing session and to Miss Siti Aminah Binti Ruslan for guiding me during the lab session. Not to forget my gratitude to my family, friends, teammates for all supporting me during my thesis preparation.

Lastly, I would like to thanks those people who are directly or indirectly involved in my final year project.

Thank you.

NURUL HUDA BINTI MUSTAFA

TABLE OF CONTENTS

		Page
DECLARATION ACKNOWLEDGEMENTS TABLE OF CONTENTS		ii iii iv
LIST	Γ OF FIGURES	v
ABS	TRACT	vi
ABS	TRAK	vii
INT	RODUCTION	
1.1	Background of study	1
1.2	Objective of study	5
DIF	FERENT EXPLANT AND FUNCTION OF ENZYME IN	
PRO	OTOPLAST ISOLATION	
2.1	Explants	6
2.2	Functions of enzymes	8
MET	THODOLOGY	
3.1	Protoplast isolation	9
3.2	Procedures of protoplast isolation	12
APP	LICATION ON MAJOR CROPS AND COMMODITY CROP	
4.1	Protoplast isolation on oil palm	17
4.2	Protoplast isolation on paddy	20
4.3	Protoplast isolation on pineapple	22
CON	NCLUSION	24
CITED REFERENCES		25
CURRCULUM VITAE		28

ABSTRACT

A REVIEW: PROTOPLAST ISOLATION BY USING DIFFERENT EXPLANT

This review study was conducted on isolation of protoplast using enzymatic methods and was focusing on different explants of major crops. It shows what types of explant is suitable and meets the preferences on demanded yield of protoplasts. Protoplast was important in regenerating and improving the traits of wanted crops with the hope of bringing benefits for the future of agrotechnology, economic and research purposes. Despite all the research conducted, still improvement and recommendations is needed to gain more successful result s in technology of culturing tissues. As for this review, the focal of view were on several types of major crops such as oil palm, paddy commodity crop such as pineapple.