

**THE APPLICATION OF PHOSPHATE SOLUBILIZING BACTERIA (PSB)
IN ENHANCING P AVAILABILITY FROM CONTAMINATED SOIL**

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**Final Year Project Report Submitted in
Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons.) Plantation Management and Technology
in the 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.

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ACKNOWLEDGEMENTS

In the name of Allah, the most benevolent and merciful, all praises to Allah the Al mighty and peace is upon his messengers'. Praise to Allah too for giving me the potency, idea, strength and tolerances in completing this project paper. I wish to address my honest gratitude to all people who were involved in this project paper from the beginning to the end. Firstly, I would like to express many thanks and great appreciation to my supervisor Madam Salwa Binti Adam for guidance, ideas and patience in guiding me to complete this project paper according to the requirement of the faculty. My appreciation also extends to all lecturer for their willingness to guide and share their valuable knowledge. For those who help me, directly or indirectly to complete my work, their names are heartily engraved in my mind. I also want to sincere thanks to all my friends. Finally, I especially wish to manifest a deep gratitude to my parents and family for making me strong with their advices and love.

RAJA NABIRA BINTI RAJA ZULKIFLI

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ABSTRACT

THE APPLICATION OF PHOSPHATE SOLUBILIZING BACTERIA (PSB) IN ENHANCING P AVAILABILITY FROM CONTAMINATED SOIL

The research was conducted on the application of Phosphate Solubilizing Bacteria (PSB), *Bacillus Sinensis* in enhancing P availability from contaminated soil due to reduce the available P with increases level of heavy metals. The soil samples were obtained from paddy field at Merlimau, Melaka. The soil were contaminated with heavy metals such as copper sulphate and iron chloride and inoculated with Phosphate Solubilizing Bacteria (PSB). The media were planting with paddy the data was measured based of plant height and plant biomass. The total P was determine using wet digestion (Akinyle and Shokunbi, 2014) and available P were determine using Bray P method (Bray and Kurtz,1945). From the result study shown that the application of PSB on different level heavy metals has no significances different in term soil pH, plant height of paddy, root biomass and tiller biomass. Meanwhile, for the result Total P, Available P, heavy metals content and root length shown that were significances different after inoculation of PSB with increasing level of treatment. In conclusion, it can be conclude that the application of PSB on contaminated soil can enhance the available P in the soil that making it much more available for the plant uptake.