SEED BANK FOR CONSERVATION OF RICE (*Oryza sativa*)

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Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons.) Plantation Technology and Management
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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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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.

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Date: 19/7/16

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ABSTRACT

Rice (*Oryza sativa*) is a staple food. Almost 90% people eat rice every day as a source of energy. Therefore, it is very important to ensure not only the supply of rice is always there, but also to pursue efforts to ensure that rice production is always optimal. Efforts to preserve the varieties of rice are also very important. The commercialization of certain types of rice causes less commercialized varieties to disappear slowly. Several factors such as low yield or lesser known potential cause the less utilized rice to become extinct. However, the lesser consumed types of rice may, no doubt, have important features such as rich nutrient content and resistant to extreme weather changes. These attributes are very important for research purposes in the future and may also be an answer to the problems faced by farmers such as rice's susceptibility to diseases. To prevent the extinction of certain types of rice, research institutions on rice are internationally established, include International Rice Research Institute (IRRI), which is located in Los Banos, the Philippines. IRRI is an institution that is very successful in the collection, management and storage of various types of rice from various places. There are two methods of conservation of rice, which are in-situ and ex-situ conservation. Both methods are practiced to maintain the diversity of rice. In-situ method is adopted by farmers, where rice is cultivated in origin environment, while ex-situ is planting rice in places other than the original environment. Rice seed storage is also very important in ensuring the existence of diversity of rice in the future and prevent various types of rice from extinction. Emphasis is given to the selection activities, planting management and the process of selecting seeds for conservation. Systematic storage is preferred so that the seeds are kept longer. In addition, it is also necessary to ensure that the collection is pure in seed bank.