ESTABLISHING BUSINESS OPPORTUNITIES FROM FOOD WASTE RECYCLING IN TERENGGANU

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CHAPTER 1

INTRODUCTION

1.1 Introduction

In the first chapter, the background of the study is presented and the problem statement is explained to support the needs of the study. The extended needs of the study will be described through study objectives and research questions.

1.2 Background of the Study

The increase of population around globe seems to the main factor that contributes the deterioration of ecosystem of the planet especially the generation of Municipal Solid Waste (MSW). Global municipal solid waste was deemed to increase annually at 3.2% to 4.5 % in the developed country and 2% to 3% in developing country (Agamuthu, 2001; SuoCheng et. Al., 2001). According the department of statistic of Malaysia, it is designated that Malaysia population had increase 40.5% within 15 years. In 1997, Malaysia population is estimated in 21 million people had increase to 29.5 million people in year 2012.

Solid waste rate in Malaysia is increasing, which includes community activities such as commercial markets, institutions and industry. Production rates vary depending on the type of waste generators and depend on the economic status of the region, 0:45 to 1:44 kilogram per capita per day (Hassan et al., 1998). It is average of 47% percent of food waste, 15% paper, 14% plastic, metal 4%, 4% wood, textiles 3%, 3% glass, 1% rubber / leather and 9% other materials. The biggest contributor of solid waste is from food waste. The food waste refers to waste food and food preparation have eaten from

residential, commercial establishments have been a contributing factor to the overflow of food waste can actually be recycled. Thus, it is worth for researcher to investigate the reasons why food waste in Terengganu is increasing and to determine the techniques of food waste recycling that could be utilize as the business opportunities in Terengganu.

1.3 Problem Statement

Beginning of 2002, there were 161 landfill sites which are actively operating in Peninsular Malaysia. Many landfills in Malaysia are in the small scale of operations equipped with a level of sophistication in the design vary (Zaini, 2003). However, in 2012, the number of landfills in operation increased to 165 and 131 do not operate the landfill, which is the total of 296 sites (Ministry of Housing and Local government, 2012). Accordingly, a total of RM14.80 needed to finance the cost of solid waste management services (collection) for each of the premises, while the cost of landfill operation is about RM28.80 / tonnes to RM49 / ton (average). Effect of dependence on landfill for the maintenance of solid waste will increase greenhouse gas emissions by 50% by 2020 (Ministry of Housing and Local Government, 2012). 75% percent of the material in landfills today is recyclable or compostable, where 50-70 percent of the weight of the garbage food service operations consists of food items that can be recycled. Composting is the process has been long-established in the world this is an appropriate technology for waste management throughout the world. Studies have suggested that the use of effective microorganisms (ME) may have several applications, on agriculture, livestock, horticulture and landscaping, composting, bioremediation, cleaning septic tanks and algae control. Moreover, using effective microorganisms on the composting of food waste is safe method than can reduce

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