UNIVERSITI TEKNOLOGI MARA

EXPLORING THE AWARENESS AND ACCEPTANCE OF UITM SELANGOR STUDENTS TOWARDS GENETICALLY MODIFIED (GM) RICE

NORAINI BINTI SARIPUDIN

Dissertation submitted in partial fulfilment of the
requirements for the degree of
Master of Science
(Plant Biotechnology)

Faculty of Plantation and Agrotechnology

October 2019

ABSTRACT

The emergence of genetic engineering technology in agriculture, particularly in relation to genetically modified crops have been a heated topic of discussion among scientists, politicians and the general public; and this have given rise to a variety of different perceptions. Previous studies conducted across different continents have concluded that there are different levels of awareness and acceptance amongst the public towards GM food such as corn, potatoes, soy and rice. The aim of this study is to explore the awareness and acceptance of GM food in among students in UiTM Selangor. Two methods of data collection were utilized for this study. In-depth interviews with two representatives from two different fields and focus group discussion with sixteen students from two Universiti Teknologi MARA campuses in Selangor. Findings compiled from the data collected revealed that a majority of the students in Malaysia have a neutral stance in regard to their acceptance towards GM rice. The public have low awareness and a negative perception towards GM food in general. Most students were found to have a moderate level of awareness towards GM rice. In addition, they are rather undecided regarding their acceptance towards GM rice. As for the public, their perception and acceptance towards GM food is negative and there are several points that could be taken into consideration by the government and relevant bodies in order to enhance the acceptance of GM food in the future. These include incorporating genetic modification technology into our education syllabus starting from primary to tertiary levels, introducing strategic agricultural policies and plans which will be beneficial for farmers and last but not least introducing programs to improve GM awareness across all levels of our society.

ACKNOWLEDGEMENT

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CHAPTER ONE

INTRODUCTION

1.1   Research Background

Recent studies have reported that the current human population is predicted to grow up to 9 billion from 6.7 billion by the year 2050, an increase up to 70% from the existing number (Ronald, 2014). Lee and Ngiam reported that Asia is projected to undergo rapid economic expansion in the 21st century while contributing to 65% of the world's population in 2050 (Md Yusoff, 2007). Such an increase will lead to a higher demand for adequate food supply throughout the world. According to International Seed Federation (ISF) study, food production must be stepped up tremendously over the next 40 years in order to accommodate the world's population growth considering challenges in terms of restricted arable land, dwindling water resources as well as anticipating adverse climate changes (Jacobsen et al., 2013).

Agriculture has been deemed as a vital food resource with India reportedly producing over 400 billion United States Dollar (USD) worth of agricultural output, the United States recorded nearly 300 billion USD and the European Union produced almost 350 billion USD respectively (Rehman et al., 2016). People around the world are largely dependent on agricultural produce as the main source of food, namely rice, wheat, vegetables and fruits among others. The key challenge faced by the current population is the goal of producing more food while maintaining the sustainability of agriculture with very limited resources (Hallerman & Grabau, 2016). Several other factors that increase the difficulty of this important undertaking include low production of important crops, use of undesirable pesticides to combat the spread of disease in agriculture crops as well as farming practices that prove harmful to the natural environment and biodiversity (Md Yusoff, 2007). This has led to the introduction and adoption of modern biotechnology in the agricultural sector as a progressive solution to anticipate and overcome the current stumbling blocks.

Modern biotechnology in the agricultural sector has pointed the direction of the industry towards a more positive route since it was introduced back in the twentieth century. Among the changes which had a direct impact on agricultural sectors all around the world are the introduction of genetically modified crops with