



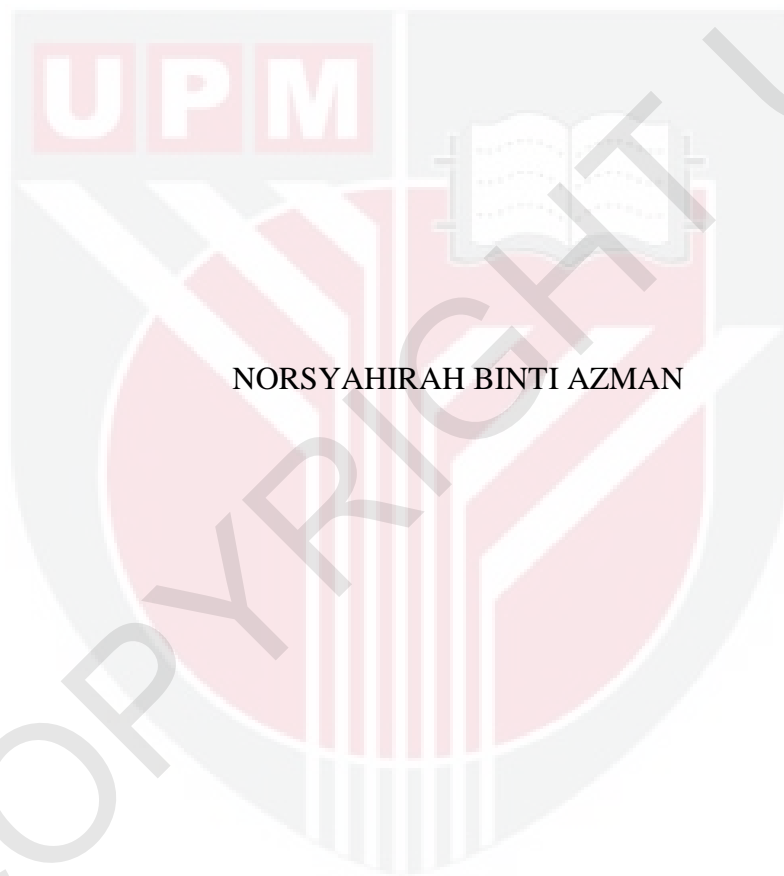
UNIVERSITI PUTRA MALAYSIA

***KNOWLEDGE, ATTITUDE AND PRACTICE OF AGRO BASED FOOD
PROCESSING TECHNOLOGY AMONG SMALL MEDIUM
ENTREPRENEURS***

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FP 2014 25

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SERDANG, SELANGOR

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157753

A project report submitted of Faculty of Agriculture, Universiti Putra Malaysia, in fulfilment of the requirement of PRT999 (Final Year Project) for the award of the degree of Bachelor Science of Agriculture

**FACULTY OF AGRICULTURE
UNIVERSITY PUTRA MALAYSIA
SERDANG, SELANGOR
2013/2014**

REPORT'S DECLARATION FORM

This project paper entitled "Knowledge, Attitude and Practice of Agro Based Food Processing Technology among Small Medium Entrepreneurs." Prepared by Norsyahirah binti Azman and submitted to the Faculty of Agriculture in partial fulfilment of the requirement of PRT999 (Final Year Project) for the award of the degree of Bachelor Science in Agriculture is based on my own original works.

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ABSTRACT

Agro based industry in Malaysia are one important component in Agriculture development. The aim of this program is to increase entrepreneur's income and produce more processed food from various raw materials from crop, animal and fish. Most developing countries recognize the importance of the small and medium scale enterprise (SME) sector for economic development. However, the establishment and successful operation of small scale food processing enterprises also have face several constraints and we do not know how far they can solve the problem related.

This study is to identify acceptance of agro based food processing technology adoption among Small and Medium Enterprises (SME) entrepreneurs. This study focusing on Selangor and Johor to provide answers to some questions related to knowledge, attitude, practice and skills of agro based food processing technology among small medium entrepreneurs.

110 respondents consisted of entrepreneurs were randomly selected in this project. One set of questionnaire was given to each of the respondents to fill in their personal profile, company profile and other important part which related to this study. All the collected data were in the raw form and statistical analysis with SPSS version 21.0 software was carried out to analyze these data.

From the result, Chips are the highest percentage of product produce by the respondents and mixture technology is the highest percentage which is the basic

technology of food processing. Most of the respondents get the knowledge of food processing technology from the agricultural agencies

Respondents have high level of knowledge, attitude, practice and skill of food processing technology based on the mean level of the study. The acceptance level of food processing technology is high. So, we can conclude that food processing technologies have given positive impact to the small medium agro based food processing.

Net incomes have significant relationship with the level of knowledge of food processing technology. The result same goes to the level of attitude of food processing technology. Gender has relationship with the level of practice of food processing technology. Marital status has significant relationship with the level of skill of food processing technology.

ABSTRAK

Industri asas tani di Malaysia adalah salah satu komponen penting dalam pembangunan pertanian. Tujuan program ini adalah untuk meningkatkan pendapatan usahawan dan menghasilkan lebih banyak makanan diproses daripada pelbagai bahan mentah dari tanaman, haiwan dan ikan. Kebanyakan negara-negara membangun menyedari kepentingan perusahaan kecil dan sederhana (PKS) untuk pembangunan ekonomi. Walaubagaimanapun , penubuhan dan kejayaan operasi perusahaan pemrosesan makanan berskala kecil juga mempunyai kekangannya dan kita tidak tahu sejauh mana mereka boleh menyelesaikan masalah berkaitan.

Kajian ini adalah untuk mengenal pasti penerimaan teknologi pemrosesan makanan berasaskan pertanian di kalangan Perusahaan Kecil dan Sederhana usahawan (PKS). Kajian ini memberi tumpuan kepada Selangor dan Johor untuk menyediakan jawapan kepada beberapa soalan yang berkaitan dengan pengetahuan, sikap, amalan dan kemahiran teknologi pemrosesan makanan asas tani di kalangan usahawan kecil dan sederhana.

110 orang terdiri daripada usahawan telah dipilih secara rawak dalam projek ini. Satu set soal selidik yang telah diberikan kepada setiap responden untuk mengisi dalam profil peribadi mereka, profil syarikat dan bahagian penting lain yang berkaitan dengan kajian ini. Semua data yang dikumpul dan analisis statistik dengan menggunakan perisian SPSS versi 21.0 telah dijalankan untuk menganalisis data ini.

Dari keputusan itu, kerepek adalah peratus tertinggi hasil produk oleh responden dan mesin pengadun adalah peratusan tertinggi yang merupakan teknologi asas dalam pemprosesan makanan. Kebanyakan responden mendapatkan pengetahuan teknologi pemprosesan makanan melalui agensi-agensi pertanian

Responden mempunyai tahap pengetahuan, sikap, amalan dan kemahiran teknologi pemprosesan makanan berdasarkan tahap min kajian. Tahap penerimaan teknologi pemprosesan makanan adalah tinggi. Jadi, kita boleh membuat kesimpulan bahawa teknologi pemprosesan makanan telah memberi impak positif kepada pengusaha industri pemprosesan makanan berasaskan pertanian kecil dan sederhana.

Pendapatan bersih mempunyai hubungan yang signifikan dengan tahap pengetahuan teknologi pemprosesan makanan. Begitu juga dengan tahap sikap teknologi pemprosesan makanan. Jantina mempunyai hubungan dengan tahap amalan teknologi pemprosesan makanan. Status perkahwinan mempunyai hubungan yang signifikan dengan tahap kemahiran teknologi pemprosesan makanan.

TABLE OF CONTENTS

ACKNOWLEDGEMENT	I
ABSTRACT	II
ABSTRAK	IV
TABLE OF CONTENTS	VI
LIST OF TABLES	XI
LIST OF FIGURES	XIV
Chapter 1: Introduction	
1.1 Background of Malaysia Agriculture	1
1.2 Agro-based Food Processing in Malaysia	2
1.3 Small Medium Enterprise in Food Processing in Malaysia	4
1.4 SME Entrepreneurs in Malaysia	6
1.5 Problem Statement	8
1.6 Objectives of Study	9
1.7 Significance of Study	9
1.7.1 Entrepreneurs	10
1.7.2 Policy maker Ministry	10
1.7.3 Small Medium Enterprise (SME)	10
1.8 Organization of Thesis	11
Chapter 2 Literature Review	
2.1 History of Food Processing	13
2.2 Food Processing Technology	14

2.3 Small Medium Industry Entrepreneurship	15
2.4 Technology Adoption and Technology Acceptance	16
2.4.1 Adoption Process	17
2.5 Knowledge, Attitude, Skill and Practice (KAP)	18
2.5.1 Steps in preparation of a KAP questionnaire	20
2.5.2 Conducting a KAP studies	21
Chapter 3 Methodology	
3.1 Location of Study	23
3.2 Sources of Data	24
3.3 Sampling Techniques	25
3.4 Questionnaire Form Structure	26
3.4.1 Survey on Knowledge, Attitude and Practice	26
3.5 Pre-Test	27
3.6 Statistical Analyses of the Data	28
3.7 Data Analysis Techniques	28
3.7.1 Descriptive Analysis	28
3.7.2 Cross Tabulation Analysis	29
3.7.3 Chi-Square Analysis	30
3.7.4 Correlation Analysis	30
Chapter 4 Result and Discussions	
4.1 Introduction	31
4.2 Socio Demographics Profile	31
4.2.1 Respondents' Age	32

4.2.2 Respondents' Gender	33
4.2.3 Race and Religion	34
4.2.4 Level of Education	34
4.2.5 Level of Education in Agriculture	36
4.2.6 Level of Education in Business	36
4.3 Business's Profile Result	37
4.3.1 Business establishment	37
4.3.2 Agro Based Food Processing	38
4.3.3 Capital to Start a Business	40
4.3.4 Annual Net Income	41
4.3.5 Types of Business	41
4.3.6 Food Processing Technologies Used In Enterprises	42
4.3.7 Number of Employees Belonging	43
4.3.8 Marketing Strategies	44
4.3.9 Marketing Methods	45
4.3.10 Product Branding	46
4.3.11 Services Provided In the Enterprise	47
4.3.12 Business Assets	48
4.3.13 Source of Raw Materials	49
4.4 The Perceptions of Respondents to Knowledge, Attitude and Practice in Food Processing Technology	50
4.4.1 Source of knowledge of food processing technology	50
4.4.2 Trained in how to use the food processing technology	51
4.4.3 Respondent's Trainee of Food Processing Technology	52
4.4.4 Frequency of Consumption of Food Processing Technology	53

4.4.5 Main Problem in Dealing with Agro-Based Food Processing Business	54
4.5 Perception Level toward Knowledge, Skill, Practice and Attitude	56
4.5.1 Introduction	56
4.5.2 Knowledge	57
4.5.3 Attitude	58
4.5.4 Practice	60
4.5.6 Skills	61
4.6 Perception of Technology Acceptance for Food Processing Technology	63
4.7 Chi-square Analysis Result	64
4.7.1 Relationship between Socio Demographic and Knowledge of Food Processing Technology	64
4.7.2 Relationship between Socio Demographic and Attitude of Food Processing Technology	65
4.7.3 Relationship between Socio Demographic and Practice of Food Processing Technology	66
4.7.4 Relationship between Socio Demographic and Skill of Food Processing Technology	67
4.8 Correlation Analysis Result	69
4.8.1 Correlation Analysis between Independent Variables and Acceptance Level of Food Processing Technology	69

Chapter 5 Conclusion and Recommendation

5.1 Summary and Conclusion 72

5.2 Limitation of the Study 75

5.3 Recommendation 76

REFERENCES

78



LIST OF TABLES

TABLE	TITTLE	PAGES
1	Table 1.1: Classification of SME	5
2	Table 4.1: Respondents' Profile Result	31
3	Table 4.2: Business establishment	37
4	Table 4.3: Agro Based Food Processing	39
5	Table 4.4: Capital to Start a Business	40
6	Table 4.5: Annual Net Income	41
7	Table 4.6: Types of Business	42
8	Table 4.7: Food Processing Technologies Used In Enterprises	43
9	Table 4.8: Number of Employees Belonging	44
10	Table 4.9: Types of Marketing Strategies	45
11	Table 4.10: Types of Marketing Methods	46
12	Table 4.11: Product Branding	46
13	Table 4.12: Services Provided In the Enterprise	47
14	Table 4.13: Business Assets	48
15	Table 4.14: Source of Raw Materials	49
16	Table 4.15: Source of Knowledge of Food Processing Technology	51
17	Table 4.16: Table of choices	52
18	Table 4.17: Types Respondent's Trainee of Food Processing Technology	53

19	Table 4.18: Frequency of Consumption of Food Processing Technology	54
20	Table 4.19: Main Problem in Dealing with Agro-Based Food Processing Business	55
21	Table 4.20: Knowledge Respondents towards Food Processing Technology	57
22	Table 4.21: Level Knowledge of Respondents towards Food Processing Technology	58
23	Table 4.22: Attitude Respondents towards Food Processing Technology	59
24	Table 4.23: Level Attitude of Respondents towards Food Processing Technology	60
25	Table 4.24: Practice Respondents towards Food Processing Technology	60
26	Table 4.25: Level Practice of Respondents towards Food Processing Technology	61
27	Table 4.26: Skill Respondents towards Food Processing Technology	62
28	Table 4.27: Level Skill of Respondents towards Food Processing Technology	62
29	Table 4.28: Perception of Technology Acceptance for Food Processing Technology	63
30	Table 4.29: Level of Perception of Technology Acceptance for Food Processing Technology	64
31	Table 4.30: Relationship between Socio	65

	Demographic and Knowledge of Food Processing Technology	
32	Table 4.31: Relationship between Socio Demographic and Attitude of Food Processing Technology	66
33	Table 4.32: Relationship between Socio Demographic and Practice Of Food Processing Technology	67
34	Table 4.33: Relationship between Socio Demographic and Skill of Food Processing Technology	68
35	Table 4.34: Correlation Coefficient between Independent Variables and the	71

LIST OF FIGURES

FIGURE	TITTLE	PAGES
1	Figure 2.1: TAM Model	17
2	Figure 3.1:Map of Johor	23
3	Figure 3.2:Map of Selangor	23
4	Figure 4.1: Percentage of Respondents' Age	33
5	Figure 4.2: Percentage of Respondents Age	34
6	Figure 4.3: Percentage of Race and Religion	35
7	Figure 4.4: Percentage of Educational Level	35
8	Figure 4.5: Percentage of Educational Level in Agriculture	36
9	Figure 4.6: Percentage of Educational Level in Business	37
10	Figure 4.7: Percentage of Business Establishment	38
11	Figure 4.8 Percentage of Agro Based Food Processing	39
12	Figure 4.9: Percentage of Capital To Start A Business	40
13	Figure 4.10: Percentage of Annual Net Income	41
14	Figure 4.11: Percentage of Types of Business	42
15	Figure 4.12: Percentage of Food Processing Technologies Used In Enterprises	43
16	Figure 4.13: Percentage of Employee Belonging	44
17	Figure 4.14: Percentage of Marketing Strategies	45
18	Figure 4.15: Percentage of Marketing Methods	46

19	Figure 4.16: Percentage of Product Branding	47
20	Figure 4.17: Percentage of Services Provided In the Enterprise	48
21	Figure 4.18: Percentage of Business Assets	49
22	Figure 4.19: Percentage of Source of Raw Materials	50
23	Figure 4.20: Percentage of Source of knowledge of food processing technology	51
24	Figure 4.21: Percentage of Respondents Have Been Trained or Not In Using	52
25	Figure 4.22: Percentage of Respondent's Trainee of Food Processing Technology	53
26	Figure 4.23: Percentage of Frequency of Consumption Of Food Processing Technology	54
27	Figure 4.24: Percentage of Main Problem in Dealing with Agro-Based Food Processing Business	56

CHAPTER 1

INTRODUCTION

1.1 Background of Malaysia Agriculture

Agriculture is an important sector to the country's economic development. It was one of the highlighted issues during Tun Abdullah Ahmad Badawi's tenure as Malaysia's Prime Minister. Abdullah strongly believed that this industry can generate wealth and reduce poverty particularly among those from rural areas.

Based on statistics, agriculture industry generates approximately 12 percent to the national gross domestic product (GDP) and also reduce unemployment rate in Malaysia. The history of agriculture can be traced back during British administration in Malaya. Several new commercial crops such as palm oil, cocoa, and rubber were introduced. Since then, these crops became the main agricultural exports to global market.

Other than those crops, Malaysian farmers also produced other high quality fruits and vegetables for domestic market consumption such as durian, coconuts, bananas, pineapples and paddy. Generally, the agriculture sector in Malaysia can be divided into estate sub-sector and smallholders' sub-sector.

Agriculture sector can be generalized into two categories. They are industrial commodities and food sub-sector. An industrial commodity under Ministry of Primary Industries (KPU) provision is responsible in ensuring high quality

production of pepper, palm oil, rubber, cocoa and wood and timber. On another note, Ministry of Agriculture and Agro-based Industry (MOA) must oversee crop production, livestock and fisheries activities.

A number of departments and organizations are involved to ensure smooth progress of agriculture industry in the country. Among some of the departments are Department of Agriculture, Department of Fisheries, Malaysia Agriculture Bank (BPM), Farmers' Organization Authority (FOA), Malaysian Agricultural Research and Development Institute (MARDI) and plenty more.

1.2 Agro-based Food Processing in Malaysia

Anem (2011) said Agro based industry in Malaysia are one important component in Agriculture development programme under Ministry of Agriculture and Agro based Industry and few other ministries. The aim of this program is to increase farmer income and produce more processed food from various raw materials from crop, animal and fish. Referring to MOA annual report, the numbers of entrepreneurs or farmers involved in agro based industry project in 2010 are 4,185 and produce various type of valued at RM 302.5 million. In 2005, there were only 3,472 entrepreneurs involved in agro based industry project with total value of RM 143.30 million.

There are 15 categories of agro based project reported by Department of Agriculture (DOA) mainly in food processing activity. The category are *Makanan Tradisional* (Traditional Food), *Kerepek*, *Cake/Pastry*, *Makanan Ringan* (Snack Food), *Makanan*

Sejuk Beku (Frozen Food), *Lain lain Makanan* (Other Food), *Hasilan Kacang Soya* (Soybean product), *Sos* (Sauce), *Makanan Basah* (Wet Food), *Hasilan Kelapa* (Coconut product), *Mee*, *Jus/Kordial/Hasil buah buahan* (Juice/Cordial/Fruit base product), *Rempahratus/Minuman Herba* (Herbs/Herbs Drinks), *Taugeh/Cendawan* (Bean Sprout/Mushroom Product) and *Kraftani* (Agro Handycraft).

Private company involved in agro based industry almost double or triple from the reported above with bigger scale of production. Small and Medium Enterprises (SME) which involved mini or medium factory size and more than 5 employee is not reported in the category. The SME agro based industry managed by a company with bank loan and proper marketing channel. This is better future in agro based industry development program with a 'HALAL' status certification program and export potential throughout the world.

Food processing is the conversion of agricultural product to substances which have particular textural, sensory and nutritional properties using commercially feasible methods. Primary processing is the conversion of raw materials into food commodities and secondary processing is the conversion of ingredients into edible products. Secondary processing involves combining foods in a particular way to change properties.

1.3 Small Medium Enterprises in Food Processing in Malaysia

SME stands for Small Medium-sized Enterprises (SME) as defined in EU law. The best description of the key characteristics of a small firm remains that used by the Bolton Committee in its 1971 Report on Small Firms. This stated that a small firm is an independent business, managed by its owner or part-owners and having a small market share.

The Bolton Report also adopted a number of different statistical definitions. It recognised that size is relevant to sector- i.e. a firm of a given size could be small in relation to one sector where the market is large and there are many competitors; whereas a firm of similar proportions could be considered large in another sector with fewer players and/or generally smaller firms within it.

Similarly, it recognised that it may be more appropriate to define size by the number of employees in some sectors but more appropriate to use turnover in others. Across Government, it is most usual to measure size according to numbers of full-time employees or their equivalent.

Section 248 of the Companies Act of 1985 states that a company is "small" if it satisfies at least two of the following criteria. There are a turnover of not more than £2.8 million, a balance sheet total of not more than £1.4 million and not more than 50 employees.

A medium sized company must satisfy at least two of the following criteria They are a turnover of not more than £11.2 million, a balance sheet total of not more than £5.6 million and not more than 250 employees.

For statistical purposes, the UK Department of Trade and Industry usually used the following definitions:

- micro firm: 0 - 9 employees
- small firm: 0 - 49 employees (includes micro)
- medium firm: 50 - 249 employees
- large firm: over 250 employees

Table 1.1: Classification of SME

EC SME Definitions			
Criterion	Micro	Small	Medium
Max. number of employees	9	49	249
Max. annual turnover	-	7 million	40 million euros
Max. annual balance sheet total	-	euros	27 million euros
Max. % owned by one, or jointly by several, enterprise(s) not satisfying the same criteria	-	5 million euros 25%	25%
Footnote: To qualify as an SME, both the employee and the independence criteria must be satisfied and either the turnover or the balance sheet total criteria			

Source: <http://webarchive.nationalarchives.gov.uk>

These small and medium-sized industries play a very important role in the Malaysian economy, especially in terms of generating employment. They also have favourable impact on income distribution in the country, and serve as a training ground in developing the skills of industrial workers and entrepreneurs.

Small scale food processing enterprises exhibit certain characteristics which distinguish them from their large scale counterparts. They are usually organized as a family business or have a single proprietor. However, as the enterprise expands, a partnership normally evolves leading eventually to the formation of a limited company. The location of the enterprises tends to be evenly distributed. They are found in both rural and urban areas, although some have already been located in industrial areas.

Many small scale food enterprises operate under a simple organizational structure, consisting of the manager owner assisted by a few workers. The products are generally relatively cheap and of rather low quality. Marketing is done directly or through agents.

1.4 Small Medium Enterprise Entrepreneurs in Malaysia

Malaysia's The Early Stage Entrepreneurial Activity (TEA) rate is fairly low within the efficiency-driven economies. It is the third lowest and share this spot with Romania. However, in comparison with previous years, TEA rate for Malaysia has increased by 0.56% to 4.9% compared to previous year (4.4%). From National Expert survey (NES), it indicated that Malaysia provides much assistance in terms of infrastructure and funding to encourage more young entrepreneurs for small and medium enterprises (SME). Now, SME are becoming a common form of employment and they tend to be begins of job creation, seedbeds for innovation and entrepreneurship.

Malaysia is seen as having only 5% of customers outside Malaysia. We are behind by almost 20% as compared to countries that hold the highest percentage of TEA with international orientation. But, it is not impossible if the government increase the export of the country by promoting Malaysia's tropical fruit and palm oil which has good export potential.

There is an urgent need for Malaysia to look at its education and training component on entrepreneurship as such mechanisms would spur the economic activities and in turn, create employment growth. At present, entrepreneurship education has become an important curriculum in the higher education institutions in Malaysia (Ismail *et al.*, 2009) and a core subject for any programmes.

On a positive note the number of women entrepreneurs in Malaysia has increased due to the support from many parties such as government, private organizations and international groups. For example, National Association of Women Entrepreneurs of Malaysia (NAWEM) was established with the purpose of harnessing the capabilities and resources of women entrepreneurs.

There are plenty of good opportunities in Malaysia for the creation of new firms which have increased considerably in the span of the last five years (The Global Entrepreneurship Monitor (GEM) Malaysian Report, 2010).

1.5 Problem Statement

To support the growth of food processing enterprises, an Industrial Master Plan was introduced in the 1980's. Various food processing technologies have been developed and given to farmers or food producers of small medium industry.

However, the establishment and successful operation of small scale food processing enterprises always facing many problems and constraints that hinder these SMEs to achieve their objective.

Among the problems and constraints are insufficient supply of good-quality raw materials; low level adoption of technology; research and development (R&D); competitive market; quality problems; lack of small scale food processor's associations; food regulations; food packaging; level of educational background; lack of industrial sites; lack of finance; lack of knowledge, attitude and practice of entrepreneurs; and management skills.

Research questions for this study are:

- 1) What is the level of respondents' knowledge, attitude and practice of food processing technology?
- 2) What is the relationship between socio demographic factors and KAP of food processing technology?
- 3) What is the impact of food processing technology in increasing the wellbeing of entrepreneurs?

Hence, this proposed study which was aimed at bridging this gap. Specifically the study was set to provide answers to some questions related to knowledge, attitude and practice of agro based food processing technology among small medium entrepreneurs.

1.6 Objectives

In general, this study is to identify the acceptance of food processing technology among SME entrepreneurs in Selangor and Johor.

Specifically, the objectives are:

- 1) To determine the socio demographic of respondent
- 2) To clarify the level of respondents' KAP of food processing technology
- 3) To identify the relationship between socio demographic factors and KAP of food processing technology
- 4) To examine the impact of food processing technology in increasing the wellbeing of entrepreneur

1.7 Significance of Study

The findings of the study will provide a clear picture about the current level of implementation of agro based food processing technology among small medium enterprise entrepreneurs. From the finding, it provides knowledge, attitude, practice and skills on factor that influence the entrepreneurs, policy maker industry and Small Medium Enterprises. This study will be significant to the following groups;

1.7.1 Entrepreneurs

Entrepreneurs nowadays have been exposed to the knowledge and skill about the agro based food processing technology by the agricultural agencies. The implementation of food processing technology will help entrepreneurs increase their product quantity resulting increasing their household income and also their business income. This study will serve the entrepreneurs about knowledge, attitude, practice and skill of food processing technology that they have to know in order to improve their business.

1.7.2 Policy maker Ministry

The findings of the study will provide information for the policy maker ministry about the problems facing by the small medium enterprise entrepreneurs of agro based food processing technology to produce their product. So, policy maker Ministry will have an idea on how to help the entrepreneurs. They also can use the findings from the study in planning new strategies for policies in improving the development of small medium agro based food processing industry.

1.7.3 Small Medium Enterprise (SME)

Small medium agro based food processing have potential to develop if given serious attention by government and the other related agencies. The implementation of food processing technology will develop their business potential. Types of market strategies, good machinery will be revealed in this study. Thus, this study will

provide a guide for them to formulate effective marketing strategies. With appropriate knowledge, they are capable to create competitive advantage in the market place.

1.8 Organization of Thesis

Chapter 1 provides broad overview of the project of knowledge; attitude and practice of Agro based Food Processing Technology among Small Medium Entrepreneurs, Introduction about Background of Malaysia Agriculture, Agro-based Food Processing in Malaysia, and Small Medium Industry in Food Processing in Malaysia.

Chapters 2 provide literature review. The purpose of a literature review is to describe the work that has been reported on a subject or field. It demonstrates an individual's ability to identify the significant information and sketch existing knowledge. It helps fill in the gap in the research that the work will address, and generates rationale or justification for the study. In other words the main purpose of a literature review is to demonstrate the scholarly capacity, identify information, and outline the presented knowledge. It places each work in the context of its role to the understanding of the topic under review. It explains how the information in the report will be used to supplement the original purpose statement. The review is also useful in describing the relationships of each work to the others under consideration.

Chapter 3 explains about methodology of the study. Location of the project, sampling techniques, sources of data, and the questionnaire form structure, pre-test, and statistical analyses of the data were explained on the Chapter 3.

Chapter 4 is about results and discussions. For this chapter, data analysis uses descriptive analysis result , chi square analysis and correlation analysis using Pearson Correlation.

Chapter 5 is about summary, conclusion and recommendation. This last chapter begins with introduction and summary of main finding of study. Next, the conclusion of this study is made. Based on finding, the recommendations are made about the topic and future study on this topic.



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