

THE CHARACTERISTICS OF MAJORITY PADDY FARMERS IN KETARA, TERENGGANU

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IN KETARA, TERENGGANU

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A project report submitted for Faculty of Agriculture, University Putra Malaysia, in fulfilment of the requirement of FINAL YEAR PROJECT (PRT 4999) for the award of

the degree of BACHELOR AGRICULTURE SCIENCE

FACULTY OF AGRICULTURE

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DECLARATION

This project paper entitled "The Characteristic of Majority Paddy Farmers in KETARA, Terengganu". Prepared by Nurul Najwa Binti Zaini and submitted to the Faculty of Agriculture in partial fulfilment to the requirement of PRT4999 (Final Year Project) for the award of the degree of Bachelor of Agriculture Sciences based on my own original works.

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ABSTRACT

Rice is the most important food for Malaysians. The government has categorized this crop as a food security. Lack of rice production means shortages of staple food, and this could put the country in a less secure condition. To solve this problem, the government has developed eight granary areas as a national main production area. These areas have a good irrigation and effective management system for production of high performance of rice. However, the performance of the rice yield is still at the low level which is 5mt/ha, but there are four granary areas that produce more than national yield average which are IADA Northwest Selangor, IADA KETARA, IADA Penang, and MADA. The characteristic of farmers play a main role to adopt the technology. The objective for this study is to identify the characteristic of majority paddy farmers in KETARA, Terengganu. Besides that, the aim of this study is to determine the relationship between the characteristic of majority paddy farmers and their performance and to examine the most important characteristic that influenced the respondent's performance. In addition, in this study we would like to know the willingness of majority paddy farmers to help the unsuccessful paddy farmers. This study was conducted in KETARA area that consists of 100 farmers as respondent who have average yield of 4 to 6mt/ha. All the data were analysed by using SPSS version 21.0 with descriptive, correlation and regression analysis techniques.

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ABST|RAK

Beras adalah makanan yang paling penting di Malaysia. Oleh itu, kerajaan telah mengkategorikan ia sebagai tanaman keselamatan. Kekurangan penghasilan beras bermakna kekurangan sumber makanan ruji dan situasi ini meletakkan negara kita dalam keadaan kurang selamat. Justeru, untuk menyelesaikan masalah ini, kerajaan telah mengenalpasti lapan kawasan jelapang padi sebagai kawasan pengeluaran beras utama Negara. Walau bagaimanapun, prestasi hasil padi masih di tahap yang rendah iaitu 5 mt/ha, tetapi terdapat empat kawasan jelapang padi yang menghasilkan lebih daripada purata hasil Negara iaitu IADA Barat Laut Selangor, IADA KETARA, IADA Pulau Pinang, dan MADA. Ciri-ciri petani memainkan peranan utama untuk menerima pakai teknologi. Objektif kajian ini adalah untuk mengenal pasti ciri-ciri petani majoriti di KETARA, Terengganu. Selain itu, tujuan kajian ini adalah untuk menentukan hubungan antara ciri-ciri petani padi dan prestasi mereka dan juga untuk mengenal pasti ciri-ciri yang paling penting dalam mempengaruhi prestasi responden. Kajian ini untuk mengenalpasti kesediaan petani majoriti untuk membantu petani kurang maju. Kajian ini di jalankan di KETARA dengan jumlah responden 100 orang yang mempunyai purata hasil antara 4 hingga 6 mt/ha. Semua data telah dianalisis melalui perisian SPSS versi 21.0 dengan menggunakan teknik analisis deskriptif, korelasi dan regrasi.

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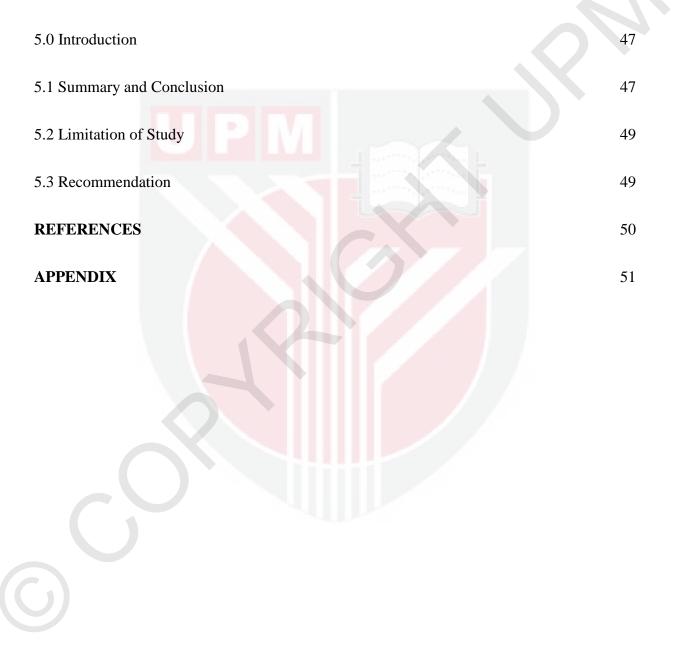
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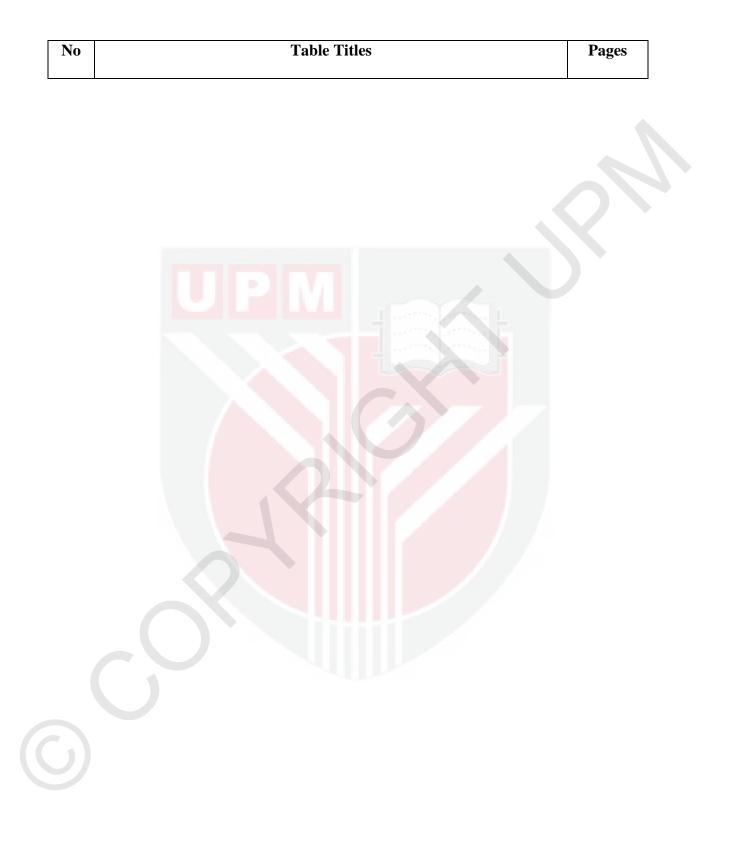
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CHAPTER 1

1.0 INTRODUCTION

1.1 Agriculture in Malaysia

Agriculture industry in Malaysia started since British colony conquer Malaysia land when they realise that Malaysia climate and soil is suitable for agriculture plantation in large scale. According to the Statistics Department, Agriculture in Malaysia makes up around 10 to12 percent of gross domestic product (GDP or the sum of goods and services produced) in Malaysia. This indicate that agriculture industry is one of the most important industry in Malaysia when total of citizen involve in agriculture industry is 6 percent of population in Malaysia. (Department of Statistics, Malaysia, 2015)

Agriculture industry opened the opportunity in many type of plantation such as oil palm (1917), cocoa (1950), rubber (1876) and paddy (1980). Number of many crop production was introduces for domestic supply such as banana, coconuts, coffee, corn and pineapples. At that time, most of people is depends on agriculture to support their life and family.

Food security in Malaysia is to some extent dependent on agriculture industry. Most of product from agriculture is useful to cover the daily food for the population. In fact, we need agriculture for easy supply of essential food, especially rice, in which we are still not self-sufficient. Agriculture industry in Malaysia refers to many section such as production of crop, livestock, plantation industry, forestry and aquaculture.

The government realise that agriculture industry is useful for the sake of food security and food supply for Malaysian population. Therefore, "*Kementerian Pertanian & Industri* *Asas Tani Malaysia*" is established. This ministry create many agencies to guide and provide specialist services in management and advices in agriculture based. In addition, the ministry designed policies and strategies to ensure the development of agricultural industry with a neat and orderly in their structure.

The establishment of institution for research and studies is helping to improve their socio-economic progress to become much better. The extension programs should be conducted as a continuous string of actions. This to ensure that the information conveyed continuously and it will be practiced by farmers.

Apart from that, due to unpredictable weather caused the agricultural sector is facing difficulties to maintain a higher quality results. For example floods strike the east coast on December 25, 2014 resulted in the Agriculture and Agro-based Industry to reach RM299 million losses due to floods. Therefore, the government realised this problem and provide relief for the non- harvested rice crop is RM1, 800 per hectare and for replanting rice (RM876 per hectare). (Utusan Malaysia, 2014)

1.2 Rice Industry in Malaysia

Rice industry in Malaysia is one of the most important industries in the country because rice is the one of daily food for Malaysian population. In 2008, due to the shortage and rising global rice prices, the government approved a program to Increase Rice Production under the Food Security Policy. Provisions of RM3, 568.6 million has been allocated to this program (DOA, 2010). Hence, assessment and development of rice cultivation technology has been introduced to farmers. Therefore, the continuous improvement on paddy productivity through precise technology can ensure the rice industry increased. IADA KETARA is one of the granary area which has high production yields (see Table 1.1). This is a prove how their farmers undertake the project management methods and technology systems properly and systematically. Among the goals of KETARA is guiding and creating 10 entrepreneurs per year in various areas of agriculture. This shows that, KETARA help upgrade farming community life there. They also educate and provide basic infrastructure for the use of farmers' fields. Therefore, KETARA is one of the organization that help to improve rice yields in Malaysia. So that, the characteristics of farmers give a big impact to high yield and performance of paddy. (KETARA, 2014)

Granary area	2002	2011	Average of yield increase (mt/ha) (2002-2011)	Planted area (Hectares)	Difference in potential revenue with actual yield (10 mt/ha)
IADA BARAT LAUT SELANGOR	4.760	5.908	1.148	37,460	4.092
IADA KETARA	3.795	5.834	2.039	9,799	4.166
IADA PP	4.602	5.728	1.126	20,610	4.272
MADA	4.261	4.955	0.694	193,020	5.045
IADA SEBERANG PERAK	4.457	4.592	0.135	16,466	5.408
KADA	2.576	4.096	1.52	53,024	5.904
IADA KERIAN SUNGAI MANIK	3.067	3.686	0.619	53,188	6.314
IADA KEMASIN SEMARAK	1.468	2.938	1.47	5,977	7.062
Total	3.904	4.773	0.869	389,544	5.227

 Table 1.1 Difference in Potential Revenue with Actual Yield (10mt/ha)

(Department of Agriculture, 2012)

Table 1.1 shows that the average of yield increase (mt/ha) at IADA KETARA is the highest number from others. This shows that, IADA KETARA have the potential to being one of granary area in Malaysia which is produce high performance of paddy.

1.3 Problem Statement

In Malaysia, there are eight granary area as a main national rice production. These granary area have a good irrigation system and effective management of production of high performance of rice. According to DOA 2012, almost all of the granary areas planted MR219. Unfortunately, the performance of the rice yield is still at the lower level, Which is 4.8mt/tan compared to their yield potential is 10.0mt/ha.

However, there are four granary areas that produce more than natural average rice productions which are IADA Northwest Selangor, IADA KETARA, IADA Penang, and MADA. The question how can these areas achieve high performance compared to others? There are 10 factors in determining the rice (MR219) yield production that is if the farmers conducted the practices properly, than the production of rice yield will increase to the yield potential value (MARDI, 2001).

So that, the problem statement for this study is What are the characteristics of a majority paddy farmers in IADA KETARA Terengganu? And what are the challenges and obstacles faced by paddy farmers in the success of their projects? So that, the characteristic of farmers plays a main role to adopt the technology instead of the criteria of the technology itself (Roger, 2003). The question is what kind of characteristic that can influence the performance?

1.4 Objectives

1.4.1 General Objectives

Generally, the objectives of this study is to identify the characteristics of majority paddy farmers in KETARA, Terengganu.

1.4.2 Specific Objectives

The specific objectives of this study is to identify the respondent's profile:

- i. The characteristics of majority paddy farmer in KETARA.
- ii. The performance of majority paddy farmers in KETARA.
- iii. The relationship between characteristics of majority paddy farmers in KETARA with their performance.
- iv. To determine the willingness of majority paddy farmers at KETARA to help unsuccessful paddy farmers.

1.5 Significant of Study

The study of the characteristic of majority paddy farmers in KETARA, Terengganu can be a learning paradigm in the institute, agencies, and authorities to enhance the knowledge and understand on the social development in the area. Based on the characteristic that has been discovered, the agricultural agencies should plan suitable agricultural extension activities to improve the behaviour of the farmers, at once they can improve the quality of work performance. Majority farmers could help to motivate others farmers because they are the largest group in rice cultivation. So this study, it could help others extension agent to identified the problem and issue that are related.

1.6 Project Organization

This project is arranged in five chapter. Chapter 1 is introduction and discussing about agriculture in Malaysia, rice industry in Malaysia, problem statements, research objectives, significant of the study and project organization. Chapter 2 is a literature review and discussing about previous study that are related to this study. Chapter 3 is a methodology that discusses about location of study, sampling design, questionnaire design, data collection and data analysis that will be used in this study. Chapter 4 is result and discussion. In this chapter, the results will be discuss in table form and figure. Lastly, Chapter 5 is for conclusion and recommendation for this study to improve and as reference for next study.

REFERENCES

1) Boston University School of Public Health (2013). Diffusion of Innovation Theory

Retrievefromhttp://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/SB721-Models/SB721-Models4.html [accessed on 8 April 2015]

- IADA KETARA (2014). *Objektif IADA KETARA* Retrieve from http://www.ketara.gov.my/v3/objektif [accessed on 8 April 2015]
- 3) Iceberg Model By Spencer and Spencer (1993)
 Retrieve from <u>http://www.managementstudyguide.com/competency-iceberg-model.htm</u> [accessed on 8 April 2015]
- 4) Jabatan Pertanian (2014). Paddy Production Survey Report MALAYSIA (off season)
- 5) Jabatan Pertanian (2013). Paddy statistics of Malaysia
- 6) KETARA (2014). Maklumat Projek Bahagian Pertanian

Ministry of Agriculture (2013). Bidang Ekonomi Utama Negara

7) MARDI, 2015. Pengiktirafan teknologi padi

Retrieve from http://www.ketara.gov.my/v3/objektif [accessed on 10 April]

- 8) Rogers, E.M. 2003. Diffusion of Innovation (fifth edition). Ney York: The Free Press
- Salim Hassan, 2012. Orientasi Keperibadian, Sikap dan Amalan Petani Maju di Barat Laut Selangor, PHD Thesis, Universiti Putra Malaysia