



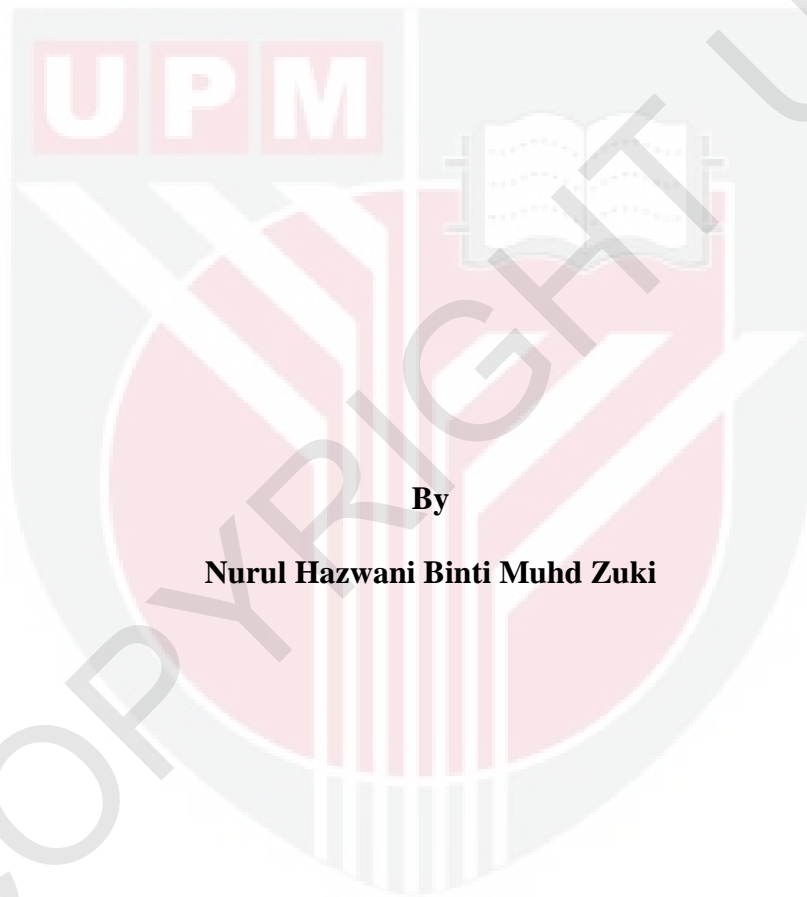
UNIVERSITI PUTRA MALAYSIA

***PERCEPTION OF FARMERS TOWARDS THE EFFECTIVENESS OF
EXTENSION ACTIVITIES BY DEPARTMENT OF AGRICULTURE (DOA)
IN MERBOK MINOR GRANARY AREA***

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FP 2017 21

**PERCEPTION OF FARMERS TOWARDS THE EFFECTIVENESS OF
EXTENSION ACTIVITIES BY DEPARTMENT OF AGRICULTURE (DOA) IN
MERBOK MINOR GRANARY AREA**



By

Nurul Hazwani Binti Muhd Zuki

**Proposal Submitted in Fulfilment of the partial requirement for Bachelor of
Science Horticulture at Universiti Putra Malaysia**

REPORT'S DECLARATION FORM

This project paper entitled 'Perception of Farmers towards the Effectiveness of Extension Activities by Department of Agriculture (DOA) In Merbok Minor Granary Area' prepared by Nurul Hazwani Binti Muhd Zuki and submitted to the Faculty of Agriculture in partial fulfilment of the requirement of PRT4999 (Final Year Project) for the award of the degree of Bachelor of Horticultural Science is based on my own original works.

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© Date: _____

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ABSTRACT

Paddy farming in Malaysia is currently declining direction. Malaysia was at a unstable position for rice self-sufficiency level. Then, vigorous modernization and development of the country might cause paddy farming was seen as unlikely as a good option. Malaysia development was start focusing on the economic crops such as rubber and oil palm. In 2005, the rice self-sufficiency level was dropping to 65% and this percentage not changes much until recent years.

Agricultural extension services are mainly responsible to create awareness among farming communities and to help uplift the living standards of rural people through educational procedures. However, they are many problems still facing by agriculture sector. Among the problems are farmers still practice conventional method farming. Beside, low participation in training given by DOA is one of the factors why technologies and development are not practicing by farmers.

The other problems faces are lack communication between farmers and extension officers and that extension officers also have low in knowledge and technical in agriculture. Farmers also have problem in willingness to increase their production which is they are scared to invest capital such as using new fertilizer, using new method or machines to increase their production of paddy.

The specific objectives of the study are to identify the respondents' profile and to determine respondents' perception levels towards agricultural extension activities and

extension officers. Then, to investigate the relationship between socio demographic factors and respondents' perception level towards extension activities and extension officers. To determine the perception of farmers' towards the effectiveness of extension activities by Department of Agriculture (DOA), minor granary area Merbok in Kedah was selected. This area was selected due to the potential of area as paddy production area which supports major granary area production if the farmers increase their productivity.

The questionnaires were distributed to 150 respondents among paddy farmers. They are being interview via structured questionnaire to determine the socio demographic profile, farm profile, perception toward knowledge, skills, attitude and practices, perception towards agriculture agency and extension activities, perception towards agriculture agency, agriculture officer and extension activity and others. All the data collected were in a raw form and statistical analysis with SPSS version 24.0 software was carried out to analyse these data.

For descriptive analysis, perception of farmers towards agriculture agency, agriculture officers and extension activities are classified as low. For chi-square results, perception of farmers towards knowledge, skills, attitude and practices and perception of farmers towards agriculture agency and extension activities were classified as high perception level. For regression analysis result, the largest contribution to dependent variable is education in agriculture ($b=0.254$). Overall, out of the three social demographic variables, education in agriculture is the only variables to have significant impact on dependent variable. The socio demographic variables do not have significant

relationship with farmers' perception on agriculture officers and perception on agriculture activities respectively.

As an overall conclusion, research crucial to be concern in the future study is a specific idea need to be make up and voice out to overcome the presence problem of lack of extension activities and role of agriculture officer in this area. Agriculture agency play an important roles to assist farmer in manage their paddy farming. Some respondents agree that agriculture agency is not uniform give the assistance to farmer. Farmers should make a complaint about this issues is a way to overcome this problem. Most farmers are depending to agriculture agency in order to guide them to be a successful farmer.

ABSTRAK

Penanaman padi di Malaysia kini mengahala kearah penyusutan. Malaysia berada pada kedudukan yang tidak stabil untuk tahap kebolehsaraan diri terhadap padi dalam negara. Kemudian, pemodenan dan pembangunan negara sendiri juga menyebabkan penanaman padi dilihat sebagai pilihan yang tidak bagus dalam bidang ini. Pembangunan Malaysia bermula pada tanaman ekonomi seperti getah dan kelapa sawit. Pada tahun 2005, tahap kebolehsaraan dari beras menurun kepada 65% dan peratusan ini dilihat tidak banyak berubah sehingga tahun kebelakangan ini.

Perkhidmatan perkembangan pertanian secara utamanya bertanggungjawab untuk mewujudkan kesedaran dalam kalangan masyarakat pertanian dan untuk membantu meningkatkan taraf hidup penduduk luar bandar melalui prosedur berpendidikan. Walaubagaimanapun, terdapat pelbagai masalah yang dihadapi oleh sektor pertanian tersebut. Antara masalah yang dihadapi adalah para petani masih mengamalkan kaedah pertanian konvensional. Selain itu, kurangnya penyertaan dalam latihan yang diberikan oleh DOA adalah salah satu faktor kenapa teknologi dan pembangunan tidak diamalkan oleh para petani tersebut

Masalah lain yang dihadapi adalah kurangnya komunikasi antara para petani dan pegawai perkembangan dan pegawai perkembangan itu sendiri mempunyai teknikal dan pengetahuan yang lemah dalam pertanian. Petani juga mempunyai masalah dalam kemahuan dalam meningkatkan hasil di mana mereka takut untuk melaburkan modal

seperti menggunakan baja jenis baru, menggunakan cara terbaru atau penggunaan mesin untuk meningkatkan hasil padi.

Objektif khusus dalam kajian ini adalah untuk mengenalpasti responden profil dan mengetahui tahap persepsi responden terhadap aktiviti pengembangan dan pegawai pengembangan. Selain daripada itu, objektif khusus kajian ini adalah untuk mengkaji hubungan antara faktor sosio demografik dan tahap persepsi responden terhadap aktiviti pengembangan dan pegawai pengembangan. Tambahan lagi, objektif kajian adalah untuk mengetahui persepsi petani padi terhadap keberkesanan aktiviti pengembangan yang dianjurkan oleh Jabatan Pertanian di kawasan jelapang padi kecil iaitu Merbok yang terletak di Kedah. Kawasan ini dipilih disebabkan oleh kawasan ini mempunyai potensi dalam membantu penghasilan padi di kawasan jelapang padi besar.

Kaji selidik ini telah diagihkan kepada 150 orang responden di kalangan petani padi. Mereka telah di temuramah mengikut struktur soalan untuk mengetahui profil petani padi, profil lading, persepsi terhadap pengetahuan, kemahiran, sikap dan amalan, persepsi terhadap agensi pertanian dan aktiviti pengembangan, persepsi terhadap agensi pertanian, pegawai pengembangan dan aktiviti pengembangan dan lain-lain. Semua data yang dikumpul di dalam bentuk kasar dan dianalisis menggunakan perisian SPSS versi 24.0.

Untuk deskriptif analisis, persepsi petani padi terhadap agensi pertanian, pegawai pertanian dan aktiviti pengembangan dikategorikan rendah. Bagi keputusan chi-square, persepsi petani terhadap pengetahuan, kemahiran, sikap dan amalan dan persepsi petani

padi terhadap agensi pertanian dan aktiviti pengembangan telah dikategorikan sebagai tinggi. Bagi keputusan analisis regresi, sumbangan terbesar kepada pembolehubah kebergantungan ialah pelajaran dalam pertanian ($b=0.254$). Keseluruhannya, ketiga-tiga sosio demografik, pelajaran dalam pertanian merupakan satu-satunya pembolehubah yang memberi kesan bererti dari pembolehubah kebergantungan. Manakala pembolehubah sosio demografik tidak mempunyai hubungan secara langsung dengan persepsi petani terhadap pegawai pengembangan dan persepsi petani kepada aktiviti pengembangan.

Kesimpulannya, penyelidikan penting yang perlu di ambil kira pada masa hadapan ialah idea khusus untuk menambahbaikkan dan menyuarakan pendapat dalam menangani masalah yang sedia ada iaitu kekurangan aktiviti pengembangan dan peranan pegawai pengembangan di kawasan ini. Agensi pertanian memainkan peranan penting dalam membantu petani padi menguruskan kawasan padi. Seseengah responden bersetuju bahawa agensi pertanian tidak memberikan bantuan yang sama rata terhadap petani padi. Petani padi harus membuat aduan tentang masalah yang mereka hadapi supaya masalah itu dapat diselesaikan secepatnya. Kebanyakan petani padi terlalu bergantung kepada agensi pertanian dalam membantu mereka untuk menjadi petani padi yang berjaya.

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CHAPTER 1

INTRODUCTION

1.0 Introduction

Agriculture has been an important sector for national economy. Basically, it is essential food and fibre for the humanities. Agriculture as a basic of life could not be avoided as mankind survival of the agricultural sector.

1.1 Background of the Study

1.1.1 Malaysia Agriculture

The Malaysian agricultural sector has come a long way since Malaysia achieved its independence fifty years ago. At the turn of the 21st century, agriculture accounted as the country's Gross domestic Product (GDP) and export earnings. The industrial sectors such as services, electrical and electronics and construction, have become engines of growth. Fatimah (2010) stated that this trend applauded by development economists as a testament to the role of the agriculture sectors as the catalyst to industrialization in the early stage of development.

The development path for the Malaysian agriculture sector has been painted with various mixes of strategies driven by goals which shifted according to the demands of time. Prior to independence, Malaya's agriculture policy was designed primarily to serve the needs of British colonial rule. British companies ventured into plantation agriculture in a

large scale mostly rubber and commercial crops. At the moment, the rural sector was remained largely in the subsistence and smallholder agriculture. By then, in 1960s (post-independence), the shift of development focus began with the introduction of two development plans: First Malaya Plan (1956-60) and Second Malaysian Plan (1961-65). These two policies was revamped the rural and agricultural sector focused on the basics of infrastructural development and institutional supports to improve rural and farming communities. The famers that were poor due to extremely small and landless, the government embarked on a massive scale of relocation, rehabilitation and reconsolidation programs for these farmers.

In 1970s, Malaysia was in era of diversification and self-sufficiency in rice. The government launched the New Economic Policy (NEP) (1971-1990) and the First Outline Perspective Plan (1971-90). The primary objective of the NEP was national unity, and this was to be achieved through a two-pronged strategy of eradication of poverty and restructuring of society. Since the poor farmers were paddy growers, this industry received the highest impact of these two policies; NEP and First Outline Perspective Plan. The policy objectives of the paddy and rice sector truly reflected the government's commitment to the industry. The policy objectives of this sector were three-pronged: "to ensure high prices to paddy farmers, to achieve self-sufficiency in rice production and to maintain stable and high quality rice to consumers" (Fatimah, 1996). In these years, there were settings up of the National Paddy and Rice Board, Rice Price Control Act, import monopoly, cheaper water rates, and investment in drainage and irrigation, cash and fertilizer subsidies to the paddy farmers. Back then, in 1975,

Malaysia was able for self-sufficiency level in rice about 95%. Unfortunately, 95% of the self-sufficiency level was not able to sustain till now.

After that, in 1980s, Malaysia went for industrialization of economy. In this era, the government was swing to heavy industry development. In end of 1970s and early of 1980s, to ensure a more effective result, the government show up a programme of more integrated approach to paddy based on popularized the strategy of integrated rural development. The strategy was then expanded to a regional development project known as Integrated Agricultural Development Projects (IADPs). There were 12 IADPs which were aimed to support agricultural economy. Initially, some IADPs such as Muda, Kemubu, Besut, Barat Laut Selangor and Sungai Manik were aimed to increase rice production to a higher level of self-sufficiency target for rice production.

In 1984, National Agricultural Policy was launched to develop agricultural sector comprehensively. NAP was designed to make sure a balanced and sustained growth rate of agricultural sector with other sectors. The policy objectives were aimed to maximizing income from agriculture through effective and efficient utilization of the country's resources and the revitalization of the sector's contribution to the national economy (Government of Malaysia, 1984). Unfortunately, NAP had not sustained the position of agricultural sector. By the year of 1990s, Malaysia was well on its way towards an industrialised economy. By this statement, consequently, the share of agricultural sector in GDP was declined to 18.7% as compared to manufacturing at 27%.

Then, National Agricultural Policy or known as NAP2 was introduced in 1992 till 1996 to overcome weakness in the previous policy with emphasis on increasing productivity, efficiency and competitiveness of agriculture sector by addressing the linkage with other economic sector in order to develop sustainable development. The establishment of world trade organization (WTO), Asia-Pacific Economic Cooperation (APEC), and ASEAN Free Trade Area (AFTA) and the rapid growth of global agriculture trade had increase the competition and opened new market opportunities for Malaysia at the international level. However, at the meantime, these global programs had been affected the fluctuation of import

1.1.2 National Agriculture Policies

Agriculture sectors are place at the third place as the most important sector contributes to the nation income. Supposedly, focusing on agriculture sectors will reduce the dependence of food import from overseas. By this reason, to improve Malaysia economic growth in a positive path, the policies have been improvised year by year or some period determined

The most important policy which has been struggling to take agriculture sector as a backbone for the nation income is the National Agricultural Policy (NAP). NAP is categorized by three phases which are First National Agriculture (1984-1991), Second National Agriculture Policy (1991-1998) and the latest is Third National Agricultural Policy (1998-2000).

The first National Agricultural Policy (NAP) was launched in 12th January 1984. NAP was presented the long term strategies to enhance agriculture and to exterminate inefficiency in agricultural sector. Generally, Jomo (2010) stated that the policy mainly focused on the increasing of food production by setting up the minimum level of self-sufficiency for meat, milk and rice.

NAP was formulated as a precaution step to avoid declination of agricultural production compare to the others sector such as services and manufacture. NAP was targeting about 80-85% from local food production to be produce locally as a step for national food security.

NAP was formulated as a precaution step to avoid declination of agricultural production compare to the others sector such as services and manufacture. NAP was targeting about 80-85% from local food production to be produce locally as a step for national food security.

1.1.3 National Agro Food Policy (2011-2020)

The third National Agriculture Policy was ended according to the set time by 2010 has a continuity policy. After that, National Agro Food Policy (NAF) has been launched on 28 September 2011. This policy was started in 2011 and will be end in 2020 forthcoming. This policy has been put in place to address the issue of food supply in Malaysia. By this policy, the expectation towards a sufficient amount of food supplies for national food security is at stake especially for rice industry.

The main objectives of the NAF (2011-2020) are:

- 1) To address food security and safety to ensure availability, affordability and accessibility;
- 2) To ensure the competitiveness and sustainability of the agrofood industry; and
- 3) To increase the income level of agropreneurs.

The Ministry of Agriculture and Agro-based Industry has lined up specific strategies to achieve the policy's objectives, covering agrofood industry development which focuses on the paddy and rice industry, fisheries, livestock, vegetables and fruits, agro-based industry and agrotourism. The policy aims at ensuring sufficient food supply, making the agrofood as a viable and sustainable industry, and increasing the income of agriculture entrepreneurs.

To be emphasized, the NAF has been pointed out to strengthening the rice industry. The self-sufficiency level of rice is maintained at 70%. The rice production will be increased to 2.91 tonnes, while productivity will be increased to 5 tonnes per hectare per year by 2022. The productivity of rice will be enhanced through the strengthening of irrigation and drainage infrastructures, and the use of new varieties of paddy and legitimate paddy seeds, right practices of agricultural technology, consolidation of paddy fields and estate management, the use of mechanization and automation with efficient agronomic management.

1.1.4 National Key Economic Area (NKEA)

Malaysian government is striving to drive strong economic fundamentals. Thus, to achieve a stable and progressive economic development, Malaysia has initiated the Economic Transformation Program or known as ETP. The ETP is organized to turn Malaysia into a high income economy by the year of 2020. Performance and Delivery Unit (PEMANDU) has identified the 12 National Key Economic Areas or known as NKEA. The NKEA is the key to driver to the success of this program to achieve potential activities for the contribution of Malaysia economic growth.

There are 12 NKEAs has been identified as a key driver toward economy progression.

There are:

12 NKEA's	
Oil, gas and energy	Wholesale and retail
Palm oil	Agriculture
Financial services	Education
Tourism	Communications content and infrastructure
Business services	Greater Kuala Lumpur
Electrical and electronics	Healthcare

Particularly, the Agriculture NKEA is focus on selected sub-sectors which have high-growth potential, namely aquaculture, seaweed farming, swiftlet nests, herbal products, fruits and vegetables and premium processed food. However, Agriculture NKEA also committed to ensuring national food security (NFS) objective is met. The paddy and livestock sub-sectors were selected.

Four (4) entry point projects (EPP) had been guidelines. There are:

- 1) EPP10: Scaling up and strengthening productivity of paddy farming in the Muda Area;
- 2) EPP11: Scaling up and strengthening productivity of paddy farming in other irrigated areas;
- 3) EPP12: Strengthening current anchor companies in cattle feedlots; and
- 4) EPP13: Partnering with a large foreign dairy company to establish dairy clusters in Malaysia.

Thus, this research paper was done as one of a research project to scaling up and strengthening the productivity of paddy farming in other irrigated areas especially toward this research sites in Kedah.

1.2 Paddy Farming

Paddy is the most widely planted crop in Malaysia after oil palm and rubber. Indirectly, our first perception, Malaysia is way forward in advancement of paddy farming. Unfortunately, these days, Malaysia is way at the back of Asia countries. Malaysia is one of many countries in our planet where food self-sufficiency is decreasing, year by year. Consequently, Malaysia is becoming a net food importing country. Even though, once it produced almost enough food for local population. These days paddy farming production is quite embarrassing and worrying for national food security level. Many parties are involved to rescale the current position of price self-sufficiency level. Malaysian government has spent more attention towards rice industry.

1.2.1 Size of Malaysia Paddy Farming

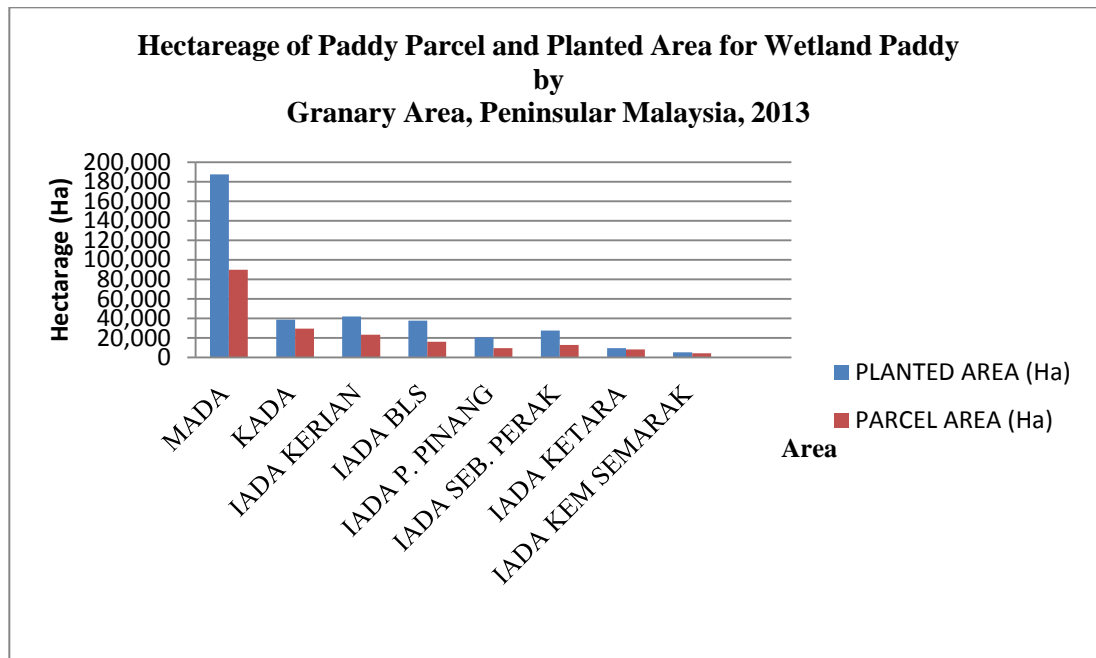
Large areas were allocated for paddy farming in Malaysia. As a staple food for Malaysian, paddy farming is necessary to achieve a stable self-sufficiency for national food security. Furthermore, Malaysia paddy farming should be in a great momentum as it would feed the national community as well as it to feed the world community. In the year 2013, 674,322 hectares were planted with paddy including those that are planted twice a year. Table 1.2 and chart indicates the area of activity for paddy farming in Malaysia.

Table 1.1: Hectareage of Paddy Parcel and Planted Area for Wetland Paddy by State, Peninsular Malaysia, 2013

Area	Planted Area (Ha)	Parcel Area (Ha)
MADA	187,413	89,843
KADA	38,641	29,626
IADA KERIAN	41,955	23,391
IADA BLS	37,833	16,237
IADA P. PINANG	20,610	9,710
IADA SEB. PERAK	27,686	12,846
IADA KETARA	9,752	8,307
IADA KEM SEMARAK	5,383	4,270
Total	369,273	194,230

Sources: Paddy Statistics of Malaysia 2013, Department of Agriculture

Chart 1.1: Hectareage of Paddy Parcel and Planted Area for Wetland Paddy by State, Peninsular Malaysia, 2013



Sources: Paddy Statistics of Malaysia 2013, Department of Agriculture

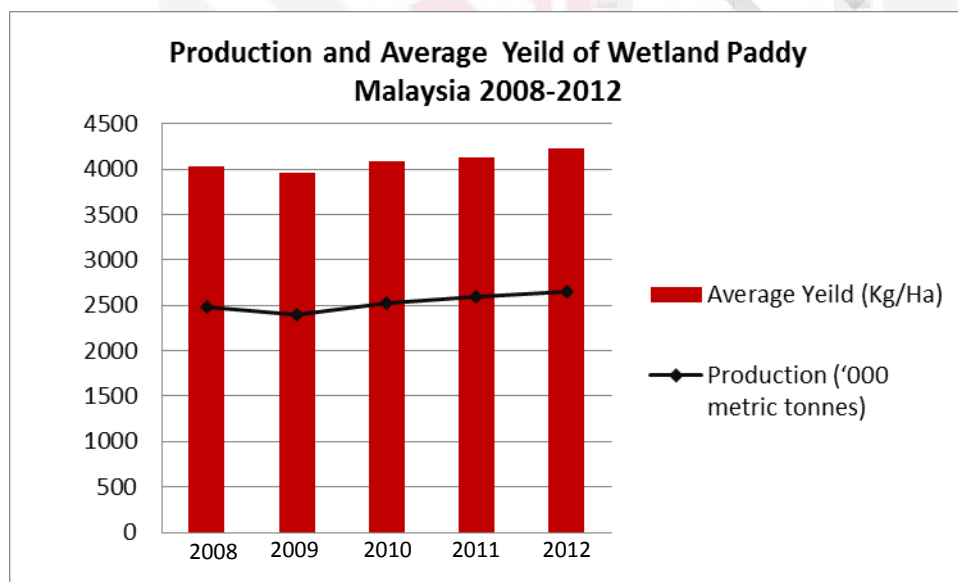
1.2.2 Production and Demand of Paddy

Productions of paddy in Malaysia are increased year by year, but still not able to meet the needs of consumers. In 2008 the production of paddy is 1500000 tonnes but then in 2009 the production decreased which is the average yield decreased to 3920 kg/ha because of several reasons such as climate factors. The next year of 2010 average yield and production are increased year by year until 2012. Proudly to be admit that rice yield production has increases from 2, 510,000 tonnes in 2010 to 2,540,000 tonnes. This was might be the reason of technology introduction in paddy farming with high investment by government for research and development to boost paddy performances per hectares.

**Table 1.2: Productions and Average Yield of Wetland Paddy, Malaysia,
2008-2012**

Year	Production ('000 metric tonnes)	Average Yield (Kg/Ha)
2008	2487	4032
2009	2401	3959
2010	2527	4086
2011	2599	4132
2012	2653	4221

**Chart 1.2: Graph Productions and Average Yield of Wetland Paddy, Malaysia,
2008-2012**



Sources: Paddy Statistics of Malaysia 2013, Department of Agriculture

1.3 Merbok Paddy Farming

Merbok is one of the minor granary areas that contribute paddy production in Kedah. Paddy farming is the main activity at this area. Sg Merbok that is located near to the Merbok area is the main source of water to supply for paddy farming. Merbok is a potential area to contribute high production of paddy in Kedah.

1.4 Department of Agriculture (DOA)

The Department of Agriculture was established in 1905. The main function of the Department of Agriculture at that particular time was to implement the agricultural policies outlined by the Government. Under the guidance of the Department of Agriculture, several Enactments have been approved to induce the development and conservation of land rights. In the Malaysia Federal Agreement (1974), in accordance with the establishment of the states government, allocation was given for the establishment of State Department of Agriculture for each individual state. The Department of Agriculture for each state will be responsible to implement development programmes that will further boost the small farmers sector.

The objectives of Department of Agriculture are provision of consultation services, technical support and professional advice in various agricultural field especially in the field of food crop and downstream industry in order to ensure sufficient food production for the country's needs. They also provide guidance and nurturing of progressive

agriculture entrepreneurs in order to increase farming productivity and eventually increase the country's agriculture produce.

Moreover, department of Agriculture should have development of trained and skilled workforce to cater to the needs of the agriculture industry. Besides that, they need to protect crops (industrial and food crops) from threat such as pests and diseases through the crop protection programme and quarantine services. They must determine the production of crops that are safe for consumption and control environmental pollution. Apart from that, they need to regulate the agriculture resources and the country's plasma-generated materials from being transferred out of the country and from threat of extinction.

Agricultural extension program is a process of informal education in the context of agricultural technology transfer carried out systematically in order to help farmers help themselves to improve their ability to achieve better socio-economic. The extension program should be done in order to deliver new technology and development in agricultural sector.

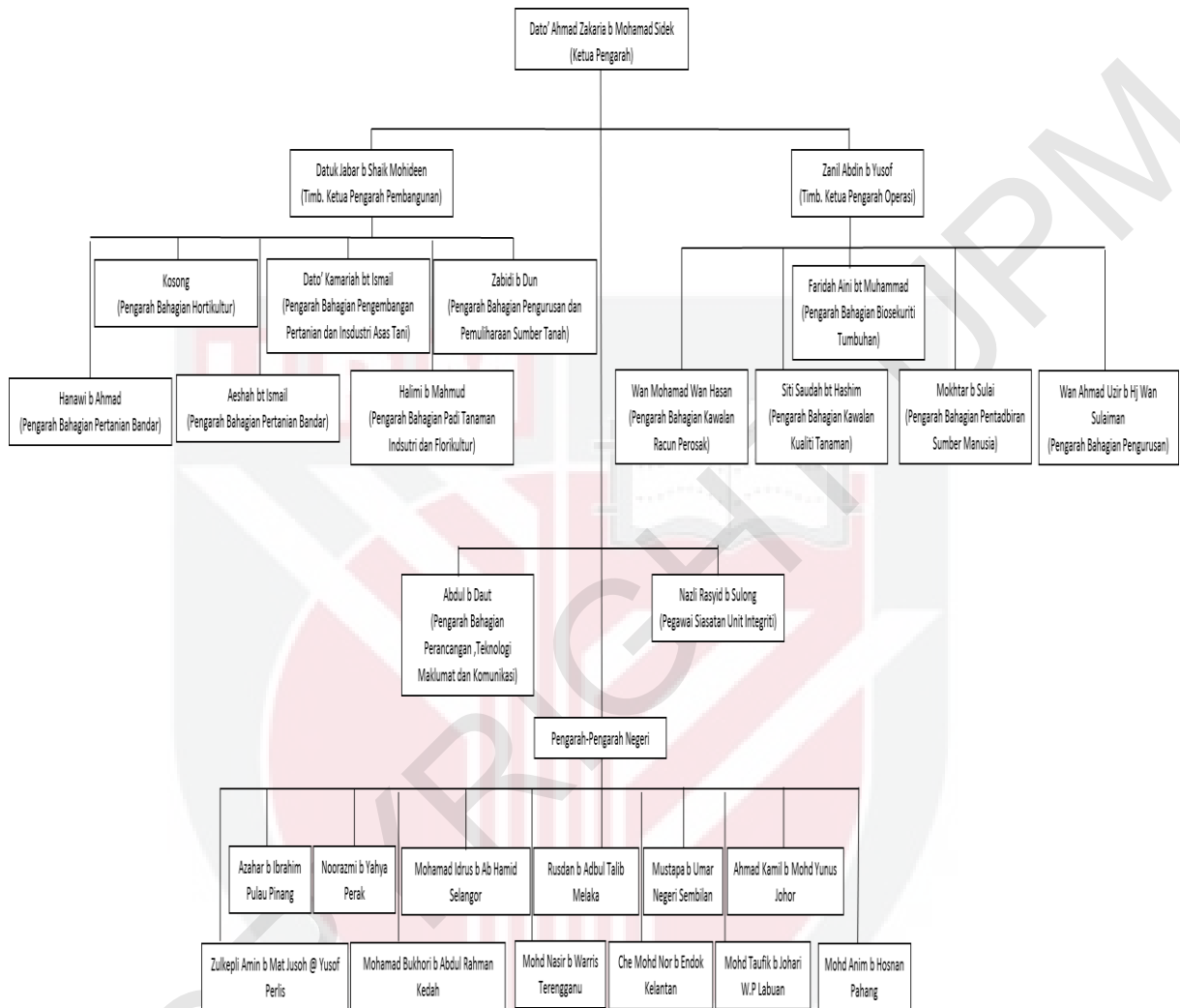
Development approach involves three categories of focus groups as farmers or entrepreneur, customer and target group. There are many extension programs such as trip advisory service, consulting service, forum discussion, farm's day, promotion and demonstration plots, farmers training and visits from expert advisor. The farmer's days and agricultural exhibitions play an important role in the dissemination of new techniques relating to agriculture among the farmers (Jaafar, 2016).

Agricultural extension is a unique service, which helps to provide small farmers and the rural poor living in remote areas an access to the latest technology; while it can also provide these populations with services to increase their productivity (World Bank, 2003).

However, Department of Agriculture also have Agricultural Community Development Program such as Taman Kekal Pengeluaran Makanan (TKPM) which is the project focus on the production of food, especially fruits and vegetables. This project is also implemented in order to address the problem lack of land suitable for food production is often faced by entrepreneurs and the private sector. Other than that, Paddy Industry Development is one of the extension programs which are strategic direction to ensure stable paddy production, as well as helping most of the rural population who depend on paddy farming. Besides, Fruits Industry Development program is to ensure the supply of fruits produced are of high quality, adequate and can meet the demand for fresh fruit in the country and also for the processing industry.

There are many extension programs such as Vegetables and Farm Crops Industry Development, Potential Commodity Industry Development, Coconut Industry Development and Agro-based Industry Development.

Figure 1.3: Organization Chart of Department of Agriculture



Sources: Official Portal of Department of Agriculture, Malaysia

1.5 Problem Statement

Malaysian paddy and rice industry often receive massive attention and seriously emphasized by the government due to its strategic importance as country's staple food. Government attention towards rice industry even started before it does achieve its independence in 1957. Paddy and rice industry continuously received attention by policy makers in the post-independence era. Later in 1971, National Paddy and rice board was established and at once took over FAMA's function in marketing rice. In order to further strengthen national paddy and rice industry and concurrently reduce government's burdens, the Malaysian government privatized The National Paddy and Rice Board (NPRB) change its name to Padiberas Nasional Berhad (BERNAS).

In 2007 world food crisis, Thailand, among the main producers in the world, had recorded a significant decrease in Thai rice prices, a maximum of 30% increase in the rice price has been recorded in Bangkok. Apart from incident in Bangkok, there was rice riots were reported in Ho Chi Minh City in Vietnam. Such incidents have demonstrated the importance of the issues of the food security needs to be addressed seriously (Wong, 2009). This is shown the paddy farming is really important in Malaysia and the world.

Malaysia was self-sufficiency for rice in 1975 at 94.6%. Unfortunately, this level decrease as well as time moving from year by year. In 2005, the self-sufficiency decreased to 72% and focused only on selected granary paddy area a. For this study, the issue to be carried out is self-sufficiency level of rice. In Malaysia, the staple food is rice as originated from paddy crop. By this reason, rice is more important than the other food

such as wheat, potato, tapioca and meat. Without rice in their daily meal, many Malaysian will suffer mentally as well as no rice in their mind.

According Norsida (2009), there were about 300,000 rice farmers who rely on rice farming as their main source of income. Poverty is usually synonyms with the agricultural community especially rice farming community which compromising mainly of Bumiputera. Among reasons recognized that lead to the incidence of poverty plaguing the local rice farming community is lack of productivity assets, active depending on small scale agriculture projects and non-agricultural activities. These problems may be of lacking of delivery extension services to all granary area. Extension program and activities should be delivering to all major and minor granary area in order to increase the production of paddy. Thus, minor granary area in Kedah is one of the potential shall be optimizes to increase production of paddy.

However, in order to increase production of paddy, farmers face challenges toward the extension program activities conducted by Department of Agriculture (DOA). Firstly, farmers still practice conventional methodfarming. This does not signify that these farmers were expert in farming activities rather they possessed traditional farming experience learned through informal education. Such experiences are usually derived from ancestors. Farmers difficult to accept a new technology and development that introduce by Department of Agriculture (DOA).

Second problem is low participation in training given by DOA are one of the factors why technologies and development are not receive by farmers and the effectiveness of

extension program are not achieved. Increase in farmer participation in agricultural development programs and agricultural extension services, decentralizing from activities and facilitating to apply local groups are the most important approaches for agricultural extension in future (Allahyari, 2009). Extension need to involve farmers themselves in the process of extension. Participation if it is to become part of extension must be clearly is interactive and empowering. Any pretence to participation will result in little change. Allowing farmers just to come to meetings or letting a few representative sit on committees will be insufficient (Antholt, 1994).

Third of the problem faces are communication between farmers and extension officers. Extension officers are key players in agricultural development. They act as a bridge between researchers and farmers, hence providing a two- way communication flow between researchers and farmers (Akpalu, 2013). Meetings are very important extension educational tool, which bring the farmers and extension worker closed and facilitate understanding of the problems and programme aimed at solving problems by mutual discussion. Therefore, more frequent such meetings, the more would be the understanding and possibilities for solutions of the problems (Jaafar, 2016). Extension officers should make their contacts regular with farmers for rapid adoption and diffusion of improved agricultural technologies and production of paddy.

Next the problem facing by is the agricultural extension officers have low in knowledge and technical. Amongst them the lack of technical knowledge about production technologies of the major crops could be an important one (Jaafar, 2016). Thus agricultural extension organizations are entrusted with the primary task of educating and

disseminating the latest agricultural technologies to the farmers, using various extension teaching methods like: individual, group and mass contact methods, have thus wider coverage.

Lastly, farmers have problem in willingness to increase their production. They are scared to invest capital such as using new fertilizer, using new method or machines to increase their production of paddy. Syed Ahmad (1982) stated there are certain elements that act as a barrier to transfer technologies to the farmers which is farmers have mind sets they will not get a big profit in the future. This is show farmers do not have a future ambition. With regard with above discussions, this study intends to investigate farmers' perception toward the extension program. This study focuses on effectiveness of extension activities by Department of Agriculture (DOA) in Merbok, Kedah minor granary area.

In doing this, the following research questions are raised:

- 1) What is the perception of farmers towards effectiveness of extension services and program?
- 2) What is the perception of farmers towards agricultural extension officer?
- 3) What is the perception of farmers' attitude towards extension activities?
- 4) What is the perception of quality of the extension program are provided by Department of Agriculture?

1.6 Study Objective

1.6.1 General Objective

The purpose of this study is to examine the perception of farmers' toward the effectiveness of extension activities by Department of Agriculture.

1.6.2 Specific Objectives

The specific objectives of this study are:

- 1) To identify the respondents profile.
- 2) To determine respondents' perception levels towards agricultural extension activities and extension officers.
- 3) To investigate the relationship between socio demographic factors and respondents' perception level towards extension activities and extension officers.

1.7 Significance of Study

1.7.1 Literature Contribution

This study expected to contribute to body literature in term of understanding of farmers towards extension program particularly in agricultural industry. According to previous literature, a number of variables influence the adoption of agricultural extension recommendations by farmers, and one of such variables is effectiveness of extension delivery (Agbarevo, 2013).

1.7.2 Practical Contribution

This study is practically expected to assist Department of Agriculture in terms of understanding farmers' perception towards extension activities. By understanding farmers' perception, Department of Agriculture can upgrade their extension programs and introducing new development of agriculture sector to accommodate real farmers' situation. When the farmers understand the effectiveness of extension activities, they will practically apply it in the paddy farm as well as increasing production and strengthen credibility as a contributor to NKEA.

1.8 Thesis Organization

Chapter 1 provides broad overview of the project of knowledge; attitude and practice of paddy farming among paddy farmers in Merbok, Kedah, introduction about background of Malaysia Agriculture, paddy farming in Malaysia, and history and the role Department of Agriculture (DOA).

Chapter 2 provide the purposes of a literature review that is describe the works that have been reported on a subject or field. It demonstrates an individual's ability to identify the significance information and sketch existing knowledge. The research of the work will address, and generates rationale or justification for the study.

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 analyses uses descriptive analyses result, chi square analysis, and regression.

Chapter 5 is about conclusion and recommendation. For this chapter, we the summarized the whole research and discuss about the limiting factor during this study.



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