



UNIVERSITI PUTRA MALAYSIA

***THE INVOLVEMENT OF EXTENSION AGENT IN PLANNING,
IMPLEMENTING AND MONITORING ACTIVITIES BASE ON THE RICE
CHECK AT
IADA PEKAN, PAHANG***

NOR LATIFAH BINTI MOHD HANIF

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AND MONITORING ACTIVITIES BASE ON THE RICE CHECK AT

IADA PEKAN, PAHANG

BY

NOR LATIFAH BINTI MOHD HANIF

A project report submitted to Faculty of Agriculture, Universiti Putra Malaysia, in
fulfillment of the requirement of PRT 4999 (Final Year Project) for the award of
the degree of Bachelor of Agricultural Science

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DECLARATION

The project report entitled “The Involvement of Extension Agent in Planning, Implementing and Monitoring Activities Base on the Rice Check at IADA Pekan, Pahang” is prepared by Nor Latifah Binti Mohd Hanif and submitted to the Faculty of Agriculture in fulfillment of the requirement of PRT 4999 (Final Year Project) for the award of the degree of Bachelor Agricultural Science.

Student’s name:

Student’s signature:

Nor Latifah Binti Mohd Hanif

Certified by:

Dr. Salim Bin Hassan.

Department of Agriculture Technology

Faculty of Agriculture

Universiti Putra Malaysia

Date: _____

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ABSTRACT

Rice is the most cultivated and consumed cereal in Malaysia. In order to fulfil the rice demand for the growing population and with the rice self-sufficiency of 70%, Malaysia has to increase its rice productivity in a sufficient and sustainable manner to meet the increasing demand. Government has made many efforts such as to support a local research by MARDI to produce a new and good variety of paddy which is MR219 and also provide the Technology of Rice check by Department of Agriculture, (DOA) since 2002 as a manual and guideline to the extension agents and also respondents for their needs. The major problem is the current yield at IADA Pekan is only 2.6 mt/ha and the performance of paddy yield is not even half than the potential yield which is 10 mt/ha. Besides that, this study aimed to measure the involvement level and work performance of extension agents in objective setting, planning, implementing, and monitoring activities in transfer of technology based on Rice Check in IADA Pekan. This study was conducted in Pekan, Pahang and the selection of respondent is by using stratified randomized method. The respondents consisted of 141 respondents from 3 schemes which are Pahang Tua, Ganchong and Pulau Jawa based on yield range of 2.1-3.1 mt/ha. The data collected were analyzed by using Statistical Package for the Social Sciences (SPSS) version 21.0. In this study, three types of statistic procedure were used to analyse the data which are descriptive, correlation and regression analysis. Based on result obtained, the respondents at IADA Pekan has moderate level of practice toward rice check technology and the relationship between management function and work performance is moderate. Based on regression analysis, objective setting and monitoring activities is important and strongly influenced the work performance in IADA Pekan. So, to conclude, extension agents at

IADA Pekan need to improve and focussing in objective setting, planning, implementing, and monitoring activities to achieve the aim and goal which is to get higher yield for next planting season. As a recommendation, all the respondents need to follow the Rice Check in paddy plantation and extension agents need to guide them for planning, implementing, and monitoring activities.



ABSTRAK

Beras adalah bijirin yang paling banyak ditanam dan digunakan di Malaysia. Bagi memenuhi permintaan beras untuk penduduk yang semakin meningkat dan dengan tahap sara diri sebanyak 70%, Malaysia perlu meningkatkan produktiviti beras supaya mencukupi dan mampan bagi memenuhi permintaan yang semakin meningkat. Kerajaan telah membuat pelbagai usaha seperti menyokong penyelidikan tempatan yang dijalankan oleh MARDI untuk menghasilkan varieti padi yang baru dan hasil yang baik seperti varieti MR219 dan juga menyediakan teknologi “Rice Check” oleh Jabatan Pertanian (DOA) sejak tahun 2002 sebagai manual dan garis panduan untuk agen pengembangan dan juga para petani untuk keperluan mereka. Masalah utama bagi kajian ini adalah hasil semasa di IADA Pekan hanya mencapai 2.6 mt/ha dan prestasi hasil padi tidak mencapai target walaupun separuh daripada hasil potensi iaitu 10 mt/ha. Selain daripada itu, kajian ini juga bertujuan untuk mengukur tahap penglibatan dan prestasi agen pengembangan dalam perancangan, pelaksanaan, dan pemantauan dalam pemindahan teknologi berdasarkan “Rice Check” di IADA Pekan. Kajian ini dijalankan di Pekan, Pahang dan pemilihan responden adalah dengan menggunakan kaedah rawak berstrata. Responden terdiri daripada 141 responden yang terdiri daripada 3 skim iaitu Pahang Tua, Ganchong dan Pulau Jawa berdasarkan julat hasil iaitu 2.1-3.1 mt / ha. Data yang dikumpul dianalisis dengan menggunakan Pakej Statistik untuk Sains Sosial (SPSS) versi 21.0. Dalam kajian ini, tiga jenis prosedur statistik telah digunakan untuk menganalisis data iaitu deskriptif, korelasi linear dan analisis regresi. Berdasarkan keputusan yang diperolehi, responden di IADA Pekan mempunyai tahap amalan yang sederhana terhadap Teknologi Rice Check dan hubungan antara fungsi pengurusan dan prestasi kerja adalah

sederhana. Berdasarkan analisis regresi, penetapan objektif dan pemantauan adalah penting dan amat mempengaruhi prestasi kerja di IADA Pekan. Sebagai kesimpulan, agen pengembangan di IADA Pekan perlu memperbaiki dan memberi tumpuan dalam tetapan objektif, perancangan, pelaksanaan, dan pemantauan untuk mencapai tujuan dan matlamat iaitu untuk mendapatkan hasil yang lebih tinggi bagi musim penanaman padi akan datang. Sebagai cadangan, semua responden perlu mengikuti Rice Check dalam penanaman padi dan pegawai pengembangan perlu membimbing mereka dalam aktiviti perancangan, pelaksanaan, dan pemantauan.

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ABBREVIATION

MOA	Ministry of Agriculture
DOA	Department of Agriculture
FAMA	Federal Agriculture Marketing Authority
MARDI	Malaysia Agriculture Research and Development Institute
FELDA	Federal Land Development Authority
RISDA	Rubber Industry Smallholders' Development Authority
IADA	Integrated Agriculture Development Area
NAP	National Agriculture Policy
FAOSTAT	Food and Agriculture Organization Statistical Databases
TNRP	Total National Rice Production
SPSS	Statistical Package for Social Science
UPM	Universiti Putra Malaysia
GDP	Gross Domestic Product
SSL	Self-Sufficiency Level
mt/ha	metric ton per hectare

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Chapter 1 is about the introduction of this study. This chapter covers about the Agriculture in Malaysia, Paddy farming in Malaysia, Granary Area, Variety of paddy, Paddy farming at IADA Pekan, Rice Check and manual technology of paddy planting, Early majority group, problem statement, and objectives.

1.1 Agriculture in Malaysia

The agricultural sector has contributed to the growth and major contributors to national income and export earnings. It's become basis of economic growth and main contributor in national economy prior to the 1970s. The agricultural sector initially derived from the increase in the production of livestock, fisheries, and other miscellaneous crops. The agricultural industry more valuable cash crops owing to the increase in earnings from major commodities such as palm oil, rubber and food commodities. Agriculture in Malaysia makes up twelve percent of the nation's Gross domestic product (GDP). Sixteen percent of the population of Malaysia is employed through some sort of agriculture.

Agriculture is one of the important source in Malaysia economics development. Besides that, agriculture sector also importance as a food source for people worldwide. The food demand will increase year by year due to increase of populations. We can't survive for a long time without food and it will affect Malaysian economy. So that, government has

taken a serious action which a total of RM6 billion were allocated to Ministry of Agriculture and Agro-Based Industry for budget in 2015.

Most of the agriculture activities in Malaysia is supervised by the Ministry of Primary Industry and Commodities especially for estate sub-sector. This sector is owned by large company and private sectors. Meanwhile, for smallholders will be supervised by Ministry of Agriculture and Agro Based Industry (MOA, 2009). This is because want to increase the yield in term of quality and quantity of the agricultural products. Besides that, a specialist agencies are formed to help the agricultural sectors in Malaysia like Department of Agriculture (DOA), Federal Agricultural Marketing Authority (FAMA), Malaysia Agriculture Research and Development Institute (MARDI), Federal Land Development Authority (FELDA), Rubber Industry Smallholders' Development Authority (RISDA) and many others agency that related directly or indirectly in agricultural sector. All of these agency need to cooperate with each other to achieve goal and optimum yield production.

Table 1.1 below shows the production of major agro food commodities by the year 2014. It states that our staple food, paddy production is increase from year 2010 to 2014. This mean Malaysian consume rice as their main source of energy for daily life.

Table 1.1: Production of Major Agrofood Commodities (metric tonnes)

Commodities	2009	2010	2011	2012	2013	2014
Paddy	2,511	2,465	2,579	2,599	2,604	2,645
Fruits	1,603	1,642	1,624	1,595	1,545	1,589
Vegetables	623	872	938	974	1,434	1,439
Cash Crop	164	156	170	273	238	238
Herbs & Spices	46	34	41	47	61	61
Industrial Crops	817	979	981	982	885	878
Flowers (pots / cutting)	410,872	414,244	417,066	419,990	484,434	508,662

(Source: Agrofood Statistic, 2014)

1.2 Paddy Farming in Malaysia

Paddy (*Oryza sativa*) is said to be originated from Gangga river and Brahmaputra river from Yangtze valley. Rice has been eaten by people since thousands of years ago. Paddy field are typically found on Peninsular Malaysia, in most of its regions. The most scenic paddy fields are located in northern Malaysia, in Kedah, Perlis and Penang which almost covering these states. Paddy fields also can be found on Malaysia's eastern coast region, mainly in Kelantan and Terengganu, and also in Selangor, especially in the districts of Kuala Selangor and Sabak Bernam. The production for paddy in increase year by year. Rice commodity is the most important because it is staple food for people around the world. Before Malaysia became heavily reliant on its industrial output, people were mainly

involved in agriculture, especially in the production of rice. It was for that reason, that people usually built their houses next to paddy fields.

In Malaysia, lowland rice constitutes 87% of rice cultivated and are mainly concentrated to eight granary areas and outside granary areas especially for small holder respondents. About 72% of the rice production in Malaysia is coming from the eight granary areas that are practicing double cropping. In peninsular West Malaysia, 76% of rice lands are provided with extensive irrigation and drainage facilities. Harvesting of the year 2015 paddy crop was completed in May 2015.

Latest official estimates put the 2015 rice production at a record level of 2.7 million tonnes, up 2 percent from the 2014 bumper harvest. Increased yields, as a result of overall favourable weather during the season and continued Government support to the rice sector, including subsidies for agricultural inputs aimed at boosting yields, more than offset a slight contraction in the area planted (FAO, 2015). The national increase in paddy land is due to the expansion of land cultivated with paddy in Sabah, East Malaysia.

The paddy industry in Malaysia was moved drastically from traditional practices to the conventional practices. Now, we are moving forward by using technologies that has been implemented by the extension agents such as Rice Check and it will be practice by the respondents.

As of 1 January 2016, the population of Malaysia was estimated to be 30 572 466 people. This is an increase of 1.51 % people compared to population of the year before (Department of Statistics Malaysia, 2016). The natural increase is expected to be positive, as the number of births will exceed the number of deaths. This mean that the demand of

the rice will increase by the increasing of population in Malaysia. Malaysian rice production is still low and cannot meet the demand by consumers.

Chang (1983) reported that with a population growth rate of 2.7% per annum, an estimated additional 45,000 tonnes of rice is required each year just to maintain the current per capita consumption levels. Currently, our self-sufficiency level (SSL) for rice is still considered low which is 70% (C. Teh, 2010). This mean that Malaysia only can produce 70% of rice production from the demands. The other 30% has to import from major rice exporting countries such as India, Thailand, and Vietnam. The government has taken this issue very seriously since this is related to national food security. Malaysia's average paddy yield is around 3.3 ton per hectare while the average paddy yield among the main granaries is around 4.9 ton per hectare and it's still considered low compared to the most efficient rice producer in the world.

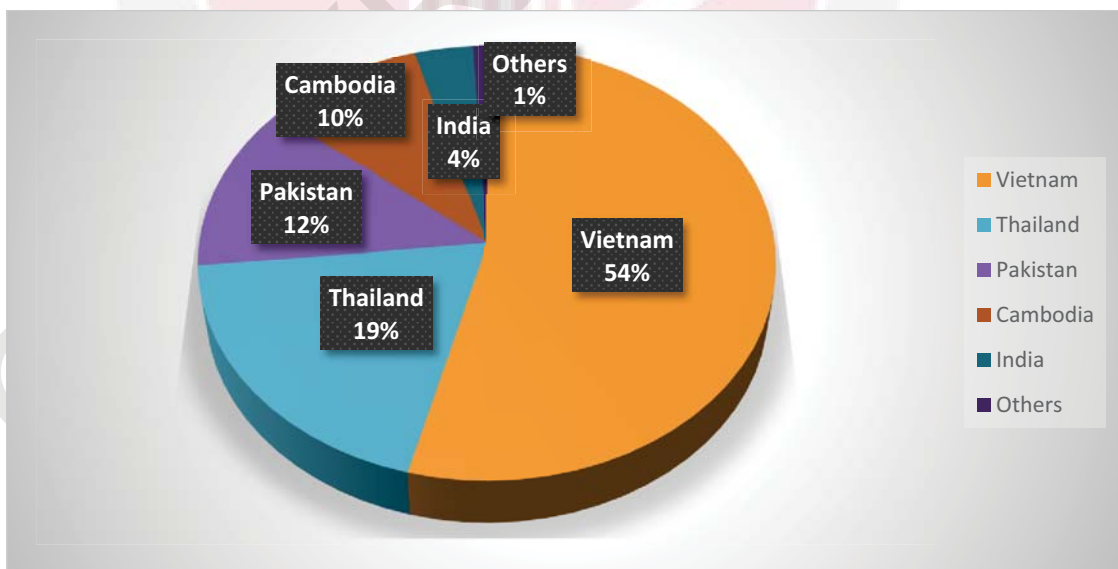


Figure 1.1: Import of Rice by Country, Malaysia 2013

(Sources: Paddy Statistics of Malaysia, 2013)

Figure 1.1 above shows the import of rice by country in Malaysia based on year 2013. The largest imported country is Vietnam with 54% and followed by Thailand and Pakistan represented 19% and 12% accordingly. The least percentage for rice imported in Malaysia is India with 4%.

1.3 Granary Area

The agriculture sector has been identified as the third engine of economic growth after manufacturing and service sector. Agriculture sector in Malaysia can basically be categorized by the co-existence plantation and smallholder's subsectors. It could later classify into food and industrial commodities. The food sub sectors may include paddy, vegetables, fruits, meats and fish while main industrial commodities are palm oil, rubber and cocoa. Among the food crops sub sector, paddy had always been accorded special treatment by the government either in terms of physical development, budget allocation, monitoring of progress and concern of the farmer's happiness, many of which are poor. Malaysia is one of the top 25 rice producing countries in the world with annual production of 2.51 million metric tons (FAOSTAT, 2009). It is mainly cultivated by small holder respondents and is highly regulated and subsidized. Malaysia's rice production is about 2.51 million metric tons in 2009 produced from cultivable land of about 0.7 million hectares since the 1980s.

Being the staple food for the entire population, rice is structurally cultivated in the designated eight main rice producing areas called Granary Areas of Malaysia. These areas are: 1) the Muda Agricultural Development Authority (MADA); 2) Kemubu Agricultural Development Authority (KADA); 3) Barat Laut Selangor Integrated Agriculture

Development Area (IADA Barat Laut Selangor); 4) Penang Integrated Agriculture Development Area (IADA Penang); 5) North Terengganu Integrated Agriculture Development (KETARA); 6) IADA Kerian Sungai Manik; 7) IADA Seberang Perak; and 8) IADA Kemasin-Semerak. Among eight granary areas, MADA is the largest and it is known as paddy bowl of Malaysia. In 2011, there were about 55,130 respondents planting rice in the MADA area either with the status of sole-ownership of land or renting with the average size of 2.2 hectares of rice fields (MADA, 2011). MADA was founded on June 30, 1970 with an objective to improve the happiness of rural population and increase revenue for the country especially rice production. MADA area covers two states of Kedah and Perlis. Total area planted with paddy in the MADA area is 96,558 hectares, of which 80.66% is located in the State of Kedah and 19.34% located in the state of Perlis. In order to ease the administration, MADA is divided into four regions, namely Kangar region, Jitra region, Pendang region and Kota Sarang Semut region. By implemented the Third National Agriculture Policy (NAP), this effort seems give a good effect towards performance of paddy in order to achieve a target of 10 mt/ha.

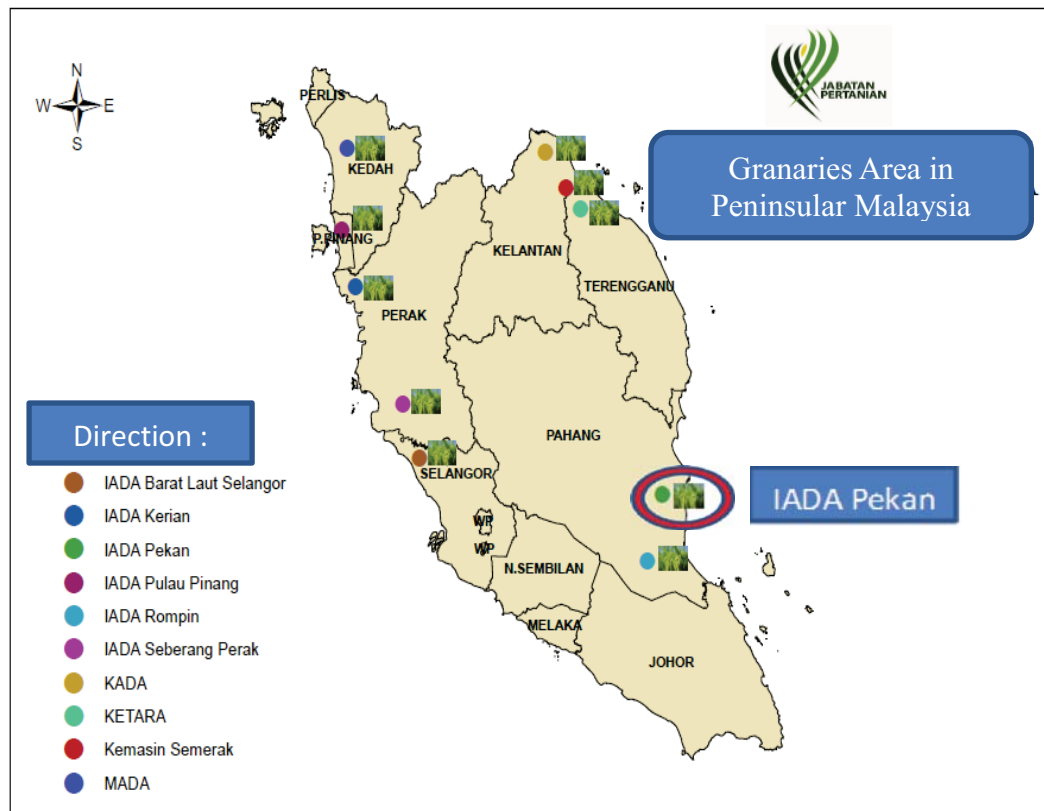


Figure 1.2: Granaries Area in Peninsular Malaysia

(Source: Department of Agriculture, 2015)

Figure 1.2 above shows the main granaries in Peninsular Malaysia. There are two new granaries that started their operation at Pahang which are IADA Pekan and IADA Rompin. These granaries are not established yet especially for their facilities like water irrigation but its depend on the management at the area.

Table 1.2: Performance in Granaries Area, Malaysia 2013

Granary Area	Planted Area / ha	Harvested Area / ha	Average Yield Kg/ha	Production Metric Tonnes	
				Paddy	Rice
				MADA	187,413
KADA	38,641	38,641	4,136	159,800	103,870
IADA KERIAN	41,955	41,955	4,495	188,586	122,581
IADA BLS	37,833	37,833	6,280	237,594	154,436
IADA P. PINANG	20,610	20,610	5,841	120,383	78,249
IADA SEB. PERAK	27,686	27,686	4,552	126,027	81,918
IADA KETARA	9,752	9,737	5,549	54,114	35,175
IADA KEM. SEMERAK	5,383	5,332	3,495	18,815	12,229
TOTAL	369,273	369,207	5,002	1,847,208	1,200,686

(Sources: Paddy Statistics of Malaysia, 2013)

Table 1.2 above shows the performance of 8 granaries area in Malaysia based on year 2013. Based on average yield, IADA Barat Laut Selangor are the highest with 6,280 kg/ha while the lowest yield is IADA Kemasin Semerak that represent 3,495 kg/ha.

1.4 Variety of Paddy

In Malaysia, rice is normally cultivated either as wet paddy especially at Peninsular Malaysia with 503,184 ha or upland rice at Sabah and Sarawak, with 165,888 ha (DOA, 2005). Under wet paddy cultivation, the national average yield is about 3.3 tonnes/ha, but with a better field management, varieties such as MR 219 and MR 220 can produce yields of about 10 tonnes/ha at several locations. In 2005, the total national rice production (TNRP) was approximately 2.24 million metric tonnes, which was contributed by eight granary areas; nevertheless, this only catered for 60 – 65% of the domestic requirement. Thus, Malaysia still imports 458,600 metric tonnes of rice to fulfil the requirement of its population (DOA, 2005). In addition to the large import, the rice production areas in Malaysia are decreasing because good rice areas, near development centres are being converted for other uses like industrial project and for residential site.

The paddy production still unable to meet the growing demand in Malaysia. A new rice variety, MR 219, has been developed by the Malaysian Agricultural Research and Development Institute (MARDI). It was officially released in January, 2001. It was the first variety to be developed by means of a direct seeding planting system. However, the variety is considered a high-yielding rice with a suitable quality in shape and taste, but it is sensitive to environmental changes. This variety is recommended the most to the respondents to be planted because of its good characteristics which are (i) include a short maturation period (105-111 days), (ii) fairly tall but strong culms, (iii) resistance to blast and bacterial leaf blight and, (iv) the rice can be marketed as a long-grain variety. With good water management and additional input of fertilizers, the MR 219 variety is capable of producing yields of more than 10 mt/ha.

Besides that, there are others varieties that have been successfully produced by MARDI such as MR220 CL1 and CL2. This variety can withstand diseases and pests like ‘weedy rice’. This variety are suitable to be planted by the farmer in an area that have been exposed in weedy rice attacks.

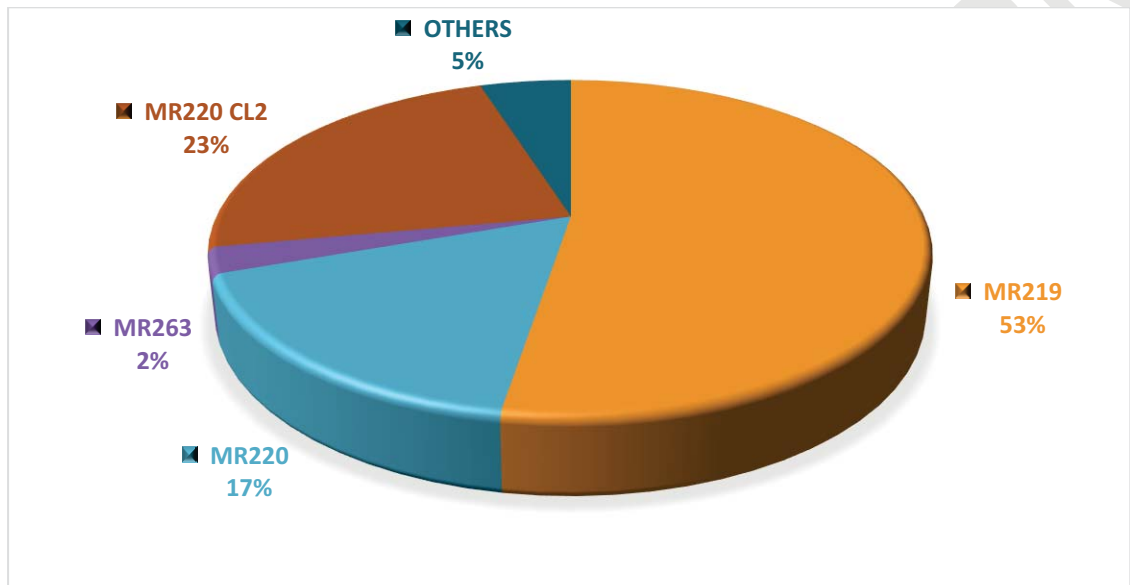


Figure 1.3: Hectares of Paddy Varieties for Overall Granary Area, Peninsular Malaysia, 2013

(Sources: Paddy Statistic of Malaysia, 2013)

Figure 1.3 above shows the hectares of paddy varieties for overall granary area in Peninsular Malaysia based on year of 2013. The most common variety used is MR219 that represented 53% and followed by MR220 CL2 and MR220 with 23% and 17% accordingly.

1.5 Paddy Farming at IADA Pekan

Pekan District is located on the banks of the Pahang River 50 km south of Kuantan, is the Royal Town of the Malaysian state of Pahang Darul Makmur. IADA Pekan is a new granary in Pahang. Pekan is a suitable area for paddy cultivation because of the soil properties. Before the presence of IADA at Pekan, it already a paddy cultivation by a farmer. Government has make a decision to open IADA at Pekan to increase the respondents yield. Pekan and Rompin will be the new granary areas of the country after the recent upgrade project area under rice cultivation was carried out at these locations within The Tenth Malaysia Plan (Tenth Malaysia Plan, 2010). The Integrated Agricultural Development Project (IADA) will be established to coordinate all projects related to upgrading this areas (Noh Omar, 2010). The existing rice cultivation area is capable to serve as a granary, thereby to increase the country's rice production. The director of IADA Pekan, Mohd Yusoff Sadi Sutan said the first allocation of RM38 million would be used to upgrade facilities, including roads, drainage and irrigation systems so that it will make the cultivation of paddy became easier. Besides that, they also will create the best irrigation system in order to ensure that paddy is planted regularly throughout the year. The construction work such as providing infrastructure has not yet been implemented because of IADA is in the process of refining to facilitate the work undertaken to develop the rice sector (Yusoff, 2013).

As a general, IADA Pekan start operating at year 2013 and have a total area of paddy cultivation of 7,211 hectares. IADA Pekan consist of six scheme that has been planted by paddy such as Pahang Tua (1,275 ha), Ganchong (1,005 ha), Pulau Jawa (209 ha), Mambang (348 ha), Serandu (240 ha) and Merchong with area of 4,134 hectares. IADA

Pekan targets in 2020 they will be able to achieve total production of six tonnes per hectare after the development work was carried out. Paddy field in this area has been planted by about 2,300 respondents and it will be increased to 12,980 hectares in 2020 involving 2,800 respondents. From these six schemes, it will divide to four extension area that will monitor the activities by the respondents.



Figure 1.4: The Location of Pekan District

(Sources: Pahang Page, 2010)

Figure 1.4 above shows the location of Pekan District in Pahang state. Pekan is located south of Kuantan and near to the “Laut China Selatan”.

Table 1.3: Extension Area and Paddy Scheme

No.	Scheme	No of plot	Area (ha)	Total number of paddy respondents
1	Pahang Tua	246	1,275	698
2	Ganchong	87	1,005	72
3	Pulau Jawa	54	209	58
Total			2,489	828

(Source: IADA Pekan, 2014)

Table 1.3 above show the extension area and paddy scheme at IADA Pekan. There are only three scheme covered by this study which are Pahang Tua, Ganchong and Pulau Jawa. Total area of paddy cultivation is 2,489 hectares with 828 total of paddy respondents.

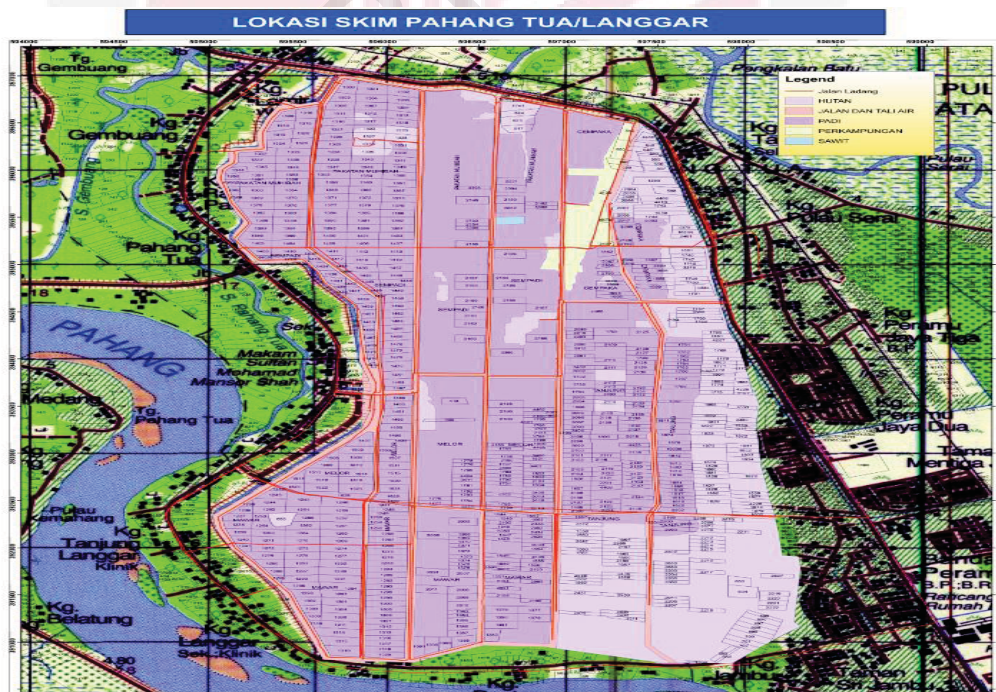


Figure 1.5: Paddy Area for Pahang Tua Scheme at IADA Pekan

(Source: IADA Pekan, 2014)

Figure 1.5 shows the paddy area for Pahang Tua scheme at IADA Pekan with total area of 1,275 hectares and 246 of paddy plot. The number of paddy farmer is 698 in this scheme.

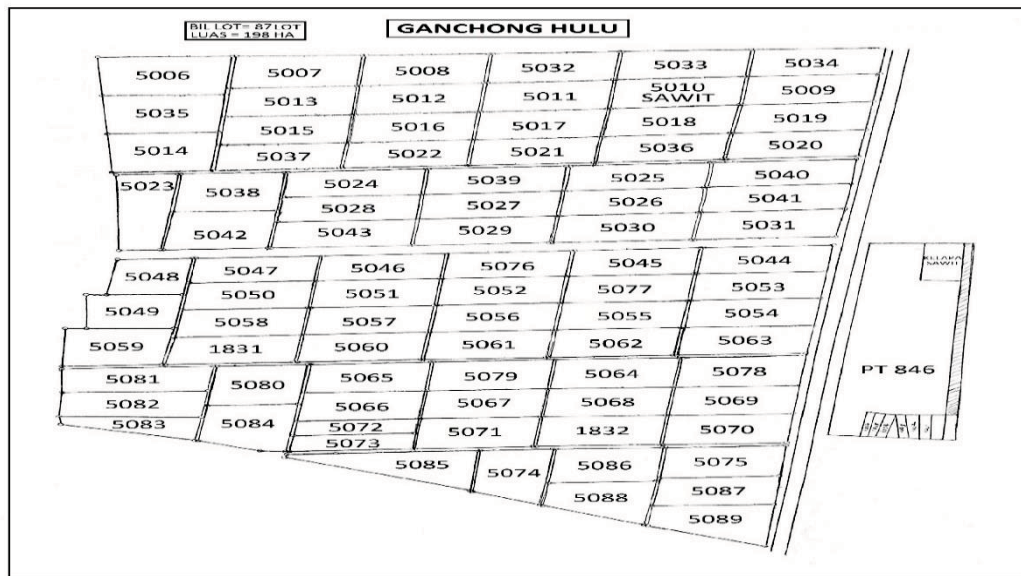


Figure 1.6: Paddy Area for Ganchong Scheme at IADA Pekan

(Source: IADA Pekan, 2014)

Figure 1.6 shows the paddy area for Ganchong scheme at IADA Pekan with total area of 1,005 hectares and 87 of paddy plot. The number of paddy farmer is 72 in this scheme.

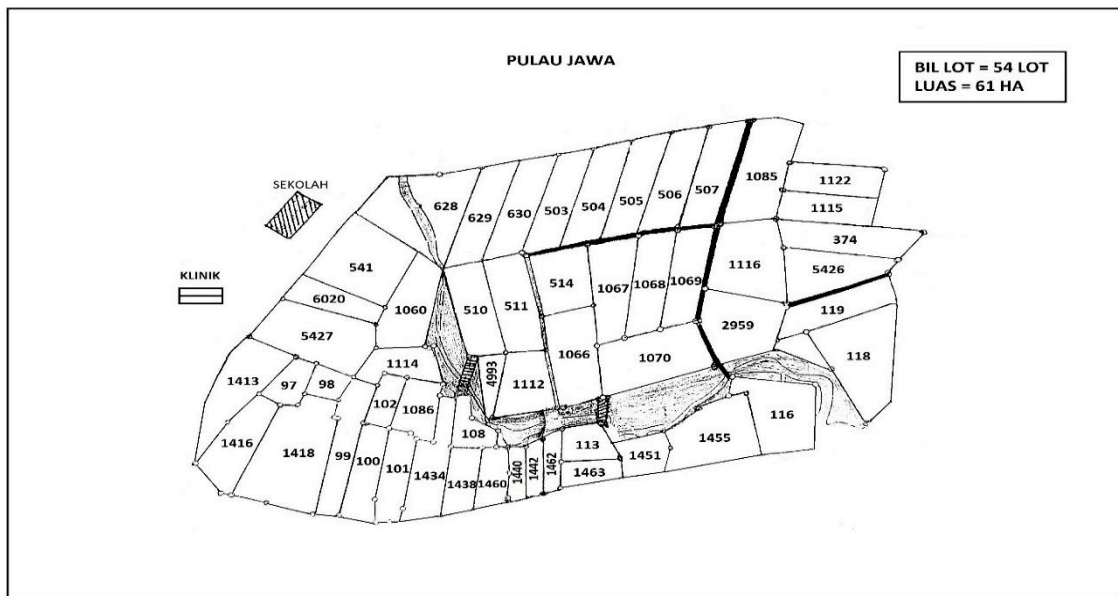


Figure 1.7: Paddy Area for Pulau Jawa Scheme at IADA Pekan

(Source: IADA Pekan, 2014)

Figure 1.7 shows the paddy area for Pulau Jawa scheme at IADA Pekan with total area of 209 hectares and 54 of paddy plot. The number of paddy farmer is 58 in this scheme.

1.6 Rice Check and Manual Technology of Paddy Planting

Rice check is a guidance to manage the paddy crop according to the set target. Rice check has 10 main components and must be followed by the respondents, extension agents, supervisor, workers and all people that involve directly in paddy plantation. The rice check was implemented in order to achieve higher production of paddy yield. The 10 main component of rice check are (i) Suitability of land, (ii) Design of land, (iii) Land preparation, (iv) Sowing, (v) Fertilizer application, (vi) Water management, (vii) Pest and disease control, (viii) Weed control, (ix) Harvesting and, (x) Quality of rice (DOA,2002).

1.7 Management Function

There are three activities is cover in this management function for extension agents in transfer of technology toward the respondents at IADA Pekan. A project is a series of activities that aim at solving particular problems within a given time frame and in a particular location. The investments include time, money, human and material resources (Bartle, 2007). Before any attempts to implement a paddy production, respondents and extension agents should set up goals and objectives. A goal is a general statement of what should be done to solve a problem. A goal emerges from the problem that needs to be addressed and signals the final destination of a project. Objectives are finite sub-sets of a goal and should be specific, in order to be achievable (Lourdes, 2011).

The three basic stages include are planning, implementing and monitoring activities. In planning activity, the item that need to be considered are the situation analysis, problem identification, definition of the goal, formulating strategies, designing a work plan, and budgeting. For implementing activity, the mobilization, utilization and control of resources and project operation are there main in this section. For monitoring activity, evaluation is make based on the planning and implementing activities that has be done at the IADA Pekan. The above illustrates the close relationship between planning, implementing and monitoring activities at IADA Pekan. It demonstrates that, planning describes ways which implementation and monitoring should be done; implementing is guided by the project work plan; and monitoring provides information for project planning and implementation.

1.8 Problem Statement

The Malaysia paddy rice industry has always been considered as an industry that produces an important commodity which rice is the main staple food for the nation. The consumption of rice expected to rise to 2.69 million metric tonnes in a year 2020 due to the increasing of population in Malaysia and worldwide. Besides that, paddy production also expected rise from 2.55 million metric tonnes in a year 2010 to 2.9 million metric tonnes in a year 2020 (Ministry of Agriculture & Agro-Based Industry Malaysia, 2015). To ensure the availability, government have taken an initiative to open a new granary in Malaysia to support the increasing demand of rice. IADA Pekan still a new granary but several scheme of paddy cultivation has been completely establishing like Pahang Tua, Ganchong and Pulau Jawa.

The government has make an effort to increase rice production by issuing a new variety of paddy MR219 that have been developed by Malaysian Agricultural Research and Development Institute (MARDI, 2002). This variety has a potential yield until 10 mt/ha but the average yield in IADA Pekan is still low which is only 2.6 mt/ha and the performance of paddy yield is not even half than the potential yield. This is why this study is done at IADA Pekan because to know the problems occur here. The rice check is already transfer to the respondents as a guidance for paddy planting to achieve goal target of yield which is 10mt/ha. The facilities also have been providing and stablish at IADA Pekan but the yield still not even achieve half from the goals set. Maybe this is related to the competency of extension agents at IADA Pekan. As a new granary area, IADA Pekan has many things to catch up and learn in order to help Malaysia to achieve self-sufficiency level of paddy. So as an initiative, government and IADA has done many project to help

increase the yield at IADA Pekan such as seminar, forum, and talk to the respondents and extension agents to achieve the goals targeted.

The number of competent and professional extension educators is clearly inadequate in most developing countries (IFAD, 2011) which poses a great challenge to the strategy to be used in ensuring that human potentials are fully utilized in extension within the developing countries. Extension agent is a person who is technically knowledgeable and skilful in handling people excellently. In this case, extension agents play an importance role at IADA Pekan to achieve the rice production target. In some instances, extension agent is referred to as social mobilization officers, facilitators or development partners (Bichi, 2010). According to the FAO (2006), extension agents are faced with high and very complex demand because of new trends in agriculture, health, industry and cooperatives that are directly related to other socio-demographic factors, such as age, population, gender and environmental issues. Baseline extension agents are the key drivers in ensuring that changes within the new emerging trends are achieved efficiently.

There are three aspects in technology transfer involving the management functions which are planning, implementing and monitoring (Donna, 2001). These aspects may influence the work performance at IADA Pekan which can be indicator in measuring the efficiency of technology transfer between extension agents to the respondents. Objective setting of the extension agents also is one of the component that will affect their work performance based on transferring of technology according to Rice check toward the respondents at IADA Pekan. Planning activity is the platform for implementing and monitoring should be done, implementing is a guide for the activities plan and monitoring provide the information or result based on planning and implementing. Hence, the involvement level

of extension agents in IADA Pekan, Pahang should be done in order to see the relationship between those four aspects with their work performance.

1.9 Objectives

1.9.1 General Objectives

Generally, the objective of this study is to know the involvement level of extension agents at IADA Pekan on paddy production based on the Rice Check.

1.9.2 Specific Objectives

The specific objectives are:

- 1) To measure the involvement level of extension agents in objectives setting, planning, implementing, and monitoring in transfer of technology based on Rice Check.
- 2) To indicate the work performance of extension agent.
- 3) To study the relationship between objectives setting, planning, implementing and monitoring with work performance.

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