



***FARMERS' PERCEPTION TOWARDS INVOLVEMENT LEVEL OF
EXTENSION AGENT IN THE PLANNING, IMPLEMENTING AND
MONITORING STAGES BASED ON THE RICE CHECK AT IADA KERIAN,
PERAK***

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BY

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A project report submitted to Faculty of Agriculture, Universiti Putra Malaysia, in
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DECLARATION FORM

This project report entitled Farmers' Perception towards Involvement Level of Extension Agent in the Planning, Implementing and Monitoring Stages Based on the Rice Check At Iada Kerian, Perak is prepared by Siti Zarinah Binti Sulong 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 of Agricultural Science.

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ABSTRACT

Malaysia still low in the production of paddy which led to the low self-sufficiency level of rice which are staple food for Malaysian. IADA Kerian known as the second largest of granary area yet being the sixth contributor on production of paddy in the country. This research study was conducted in Integrated Agricultural Development Area (IADA) Kerian, Perak to determine involvement level of extension agent which related to job performance according to the Rice check. Specifically, the research study determined the extension agent's involvement level based on the respondents' perception on objective setting, planning, implementing and monitoring stages as the independent variables. The research study also determined level of job performance of extension agent based on the respondents' perception as dependent variable.

Self-administered questionnaire were done to 166 of paddy farmers from four different extension areas registered under IADA Kerian with the criteria average yield production of 3.00-3.99 MT/ha – Selinsing-Semanggol, Bagan Serai-Beriah, Tanjung Piandang and Bagan Tiang-Parit Buntar. The data were analyzed using Statistical Package for the Social Science (SPSS) version 21 with descriptive statistics, Pearson correlation and multiple regression analysis.

Results acquired indicated that extension agents rated high level of job performance based on respondents' perception. Majority of respondents also rated high level of involvement on objective setting, planning, implementing and monitoring stage on extension agent based on Rice check. However, involvement level on objective setting has indicated the highest involvement level which led to the performance level of

extension agents in IADA Kerian. A suitable program can be introduced to increase involvement level of extension agent in to carry out their duties and responsibilities efficiently, so that productivity of paddy yield can surpass the national average yield of paddy production and increase self-sufficiency level.



ABSTRAK.

Malaysia masih lagi rendah dalam penghasilan padi di mana menyumbang kepada tahap sara diri yang rendah bagi nasi yang merupakan makanan ruji bagi penduduk Malaysia. IADA Kerian dikenali sebagai jelapang padi kedua terbesar tetapi masih lagi menjadi penyumbang keenam bagi penghasilan padi dalam negara. Suatu kajian telah dilaksanakan di Kawasan Pembangunan Pertanian Bersepadu (IADA) Kerian, Perak untuk menentukan tahap penglibatan agen pengembangan yang mempunyai perkaitan terhadap prestasi kerja berdasarkan sistem Semakan Tanaman padi. Secara spesifik, kajian dijalankan untuk menentukan tahap penglibatan agen pengembangan berdasarkan kepada persepsi responden untuk penyediaan matlamat, peringkat perancangan, pelaksanaan dan pemantauan sebagai pembolehubah tidak bersandar. Kajian juga dilakukan untuk menentukan tahap prestasi kerja agen pengembangan berdasarkan kepada persepsi responden sebagai pembolehubah bersandar.

Soal selidik telah diedarkan kepada 166 orang pengusaha sawah daripada empat daerah pengembangan yang berbeza yang berdaftar di bawah IADA Kerian dengan kriteria purata hasil pengeluaran 3.00-3.99 MT/ha – Selinsing-Semanggol, Bagan Serai-Beriah, Tanjung Piandang and Bagan Tiang-Parit Buntar. Data kemudian dianalisa menggunakan *Statistical Package for the Social Science* (SPSS) versi 21 dengan statistik berbentuk diskriptif, korelasi Pearson dan analisis regresi.

Keputusan diperolehi menunjukkan bahawa agen pengembangan dinilai tahap prestasi kerja yang tinggi berdasarkan persepsi responden. Tahap penglibatan agen pengembangan juga dinilai tinggi bagi penyediaan matlamat, peringkat perancangan,

pelaksanaan dan juga pemantauan berdasarkan Semakan Tanaman padi. Walaubagimanapun, tahap penglibatan agen pengembangan dalam penyediaan matlamat menunjukkan tahap penglibatan yang paling tinggi menyumbang kepada tahap prestasi agen pengembangan di IADA Kerian.

Program yang bersesuaian boleh diperkenalkan bagi meningkatkan tahap penglibatan agen pengembangan dalam menjalankan tugas dan tanggungjawab secara efisien, oleh itu produktiviti hasil padi boleh melebihi purata penghasilan hasil padi negara dan meningkatkan kadar sara diri.

CHAPTER 1

INTRODUCTION

1.0 Introduction

This research study is an attempt to determine the farmers' perception towards the involvement level of extension agent in different extension area under IADA Kerian through Rice Check.

Chapter 1 covers seven sub-topics: background of the study, problem statement, objective, significance of the study, assumption, definition of terms and thesis organization.

1.1 Paddy Farming in Malaysia

Agricultural farming is an important sector at the economy in developing countries including Malaysia for several reasons. In spite of making sure there is food security and foreign exchange, it is a major source of income for the farming communities.

Paddy Statistics Malaysia (2013) stated that paddy is the third major crop widely planted in Malaysia after palm and rubber. Of 674,332 hectares of land area are used for paddy planting, including paddy that are planted twice a year.

As stated by the Minister of International Trade and Industry, Datuk Seri Mustafa Mohamed (2014), agriculture sector being the third engine contributor of economic

growth in Malaysia in 2013 with RM43.3 billion or 7.3% contribution to Growth Domestic Product (GDP) after services and manufacturing sector.

The World Food Summit (1996) as cited by FAO (2006) states food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

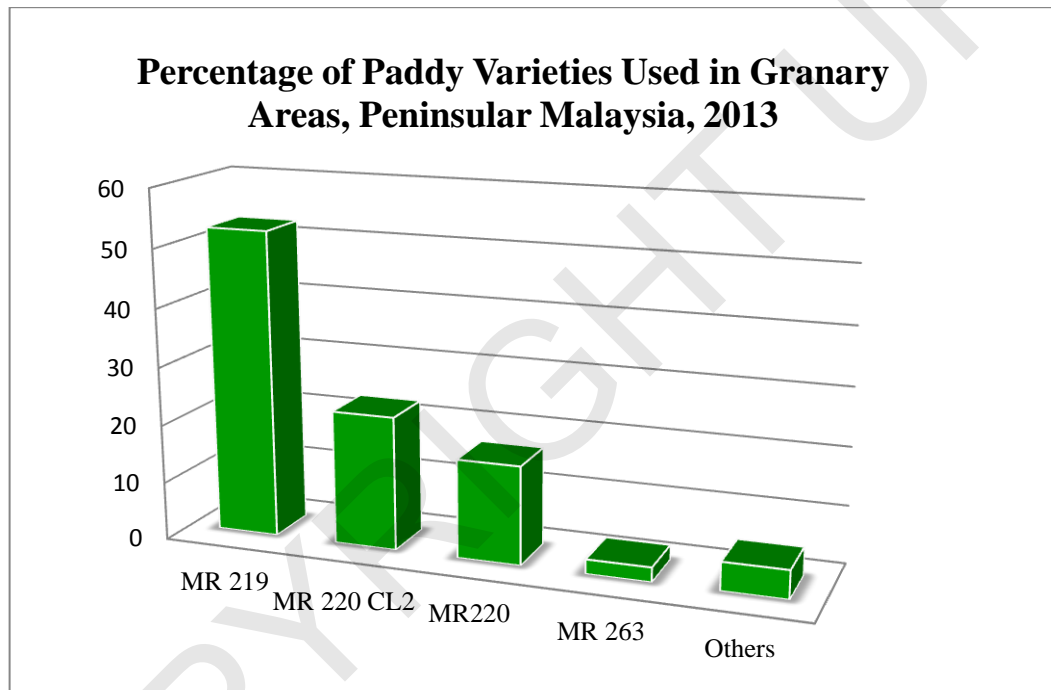
Low paddy production in the country can lead to high importation of rice to meet the domestic demand. Data statistic from Department of Agriculture (DOA, 2013) showed that Malaysia only achieved 72.2% of self-sufficiency level (SSL) for rice and the rest 27.8% still being imported from others country.

Paddy or scientific name, *Oryza sativa*, is the major staple food for most people in Asian country including Malaysia. In Malaysia, variety of paddy MR219 has been developed by the Malaysian Agricultural Research and Development Institute (MARDI) and been used widely and popular among the farmer (Paddy Statistics Malaysia, 2013). The data from Paddy Statistics (2013) also shows that 52.6% of the total area (369,273 ha) was planted with MR219. MARDI (2014), state that MR219 had been planted in more than 90% of the planted area in the country for more than 20 seasons. MR219 is the product through hybridization process between the two varieties which is MR137 and MR151.

The result of the research shows that MR219 have a high potential production yield which is 10 MT/ha. However, the granaries still did not achieve the expected performance of the potential yield of MR219.

Table 1.1: Percentage Paddy Varieties Used in Granary Areas, Peninsular Malaysia, 2013

Paddy Variety	Percentage Used
MR219	52.6
MR220 CL2	23.0
MR220	17.0
MR263	2.5
Others	4.9



(Paddy Statistics of Malaysia, 2013)

Figure 1.1: Graph on Percentage of Paddy Varieties Used in Granary Areas, Peninsular Malaysia, 2013

The government, during the 10th Malaysian Plan (2011-2015) period, set a target for every paddy farmer, which was 10 MT/ha, to ensure that a sufficient amount of rice is available and accessible to the population. However, the latest production numbers from

2013 revealed that the average yield production of paddy for overall main granary area was still only 5.002 MT/ha (Paddy Statistics Malaysia, 2013).

By comparing the average yield for eight granaries from 2011 until 2013, IADA Barat Laut Selangor shows a steady increment and highest average production was 6.280 MT/ha in 2013, while MADA, IADA Pulau Pinang and IADA Ketara achieve National Average Yield (4.8 MT/ha) starting 2012. On the other hand, (KADA, IADA Kerian, IADA Seberang Perak and IADA Kemasin Semarak) are still below the National average yield.

1.2 Granary Area

Being the major staple food for the population of Malaysia, the total rice production area is 369,273 ha.

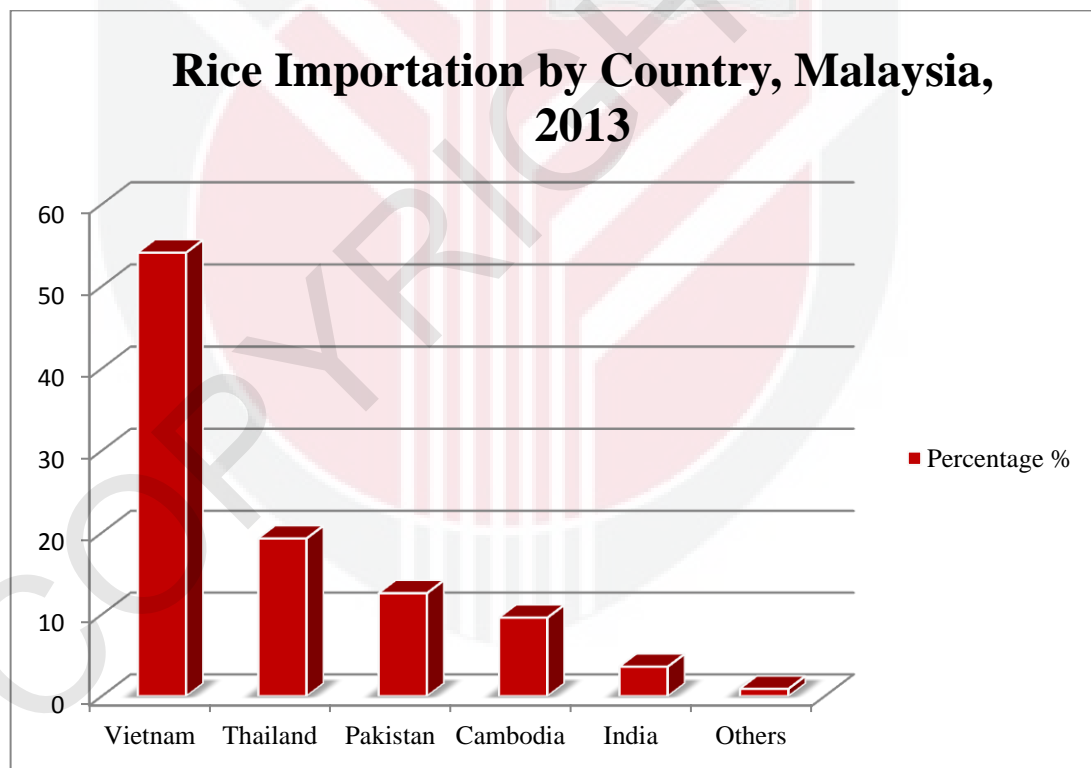
There are eight major paddy producing areas recognized by the Government in the National Agricultural Policy, which are Integrated Agricultural Development Area (IADA) Barat Laut Selangor, IADA Pulau Pinang, IADA Kemasin-Semerak, Muda Agricultural Development Authority (MADA), IADA Seberang Perak, IADA Kerian, Kemubu Agricultural Development Authority (KADA), and North Terengganu Integrated Agriculture Development (KETARA).

Economic demand defined as customer's willingness and ability to purchase a need, either goods or services, over a range of prices in the given period of time.

To meet the demands, Malaysia has to import 10,314,000 MT of rice from other countries such as Vietnam, Thailand, Pakistan, Cambodia and India to cover the 30% deficit.

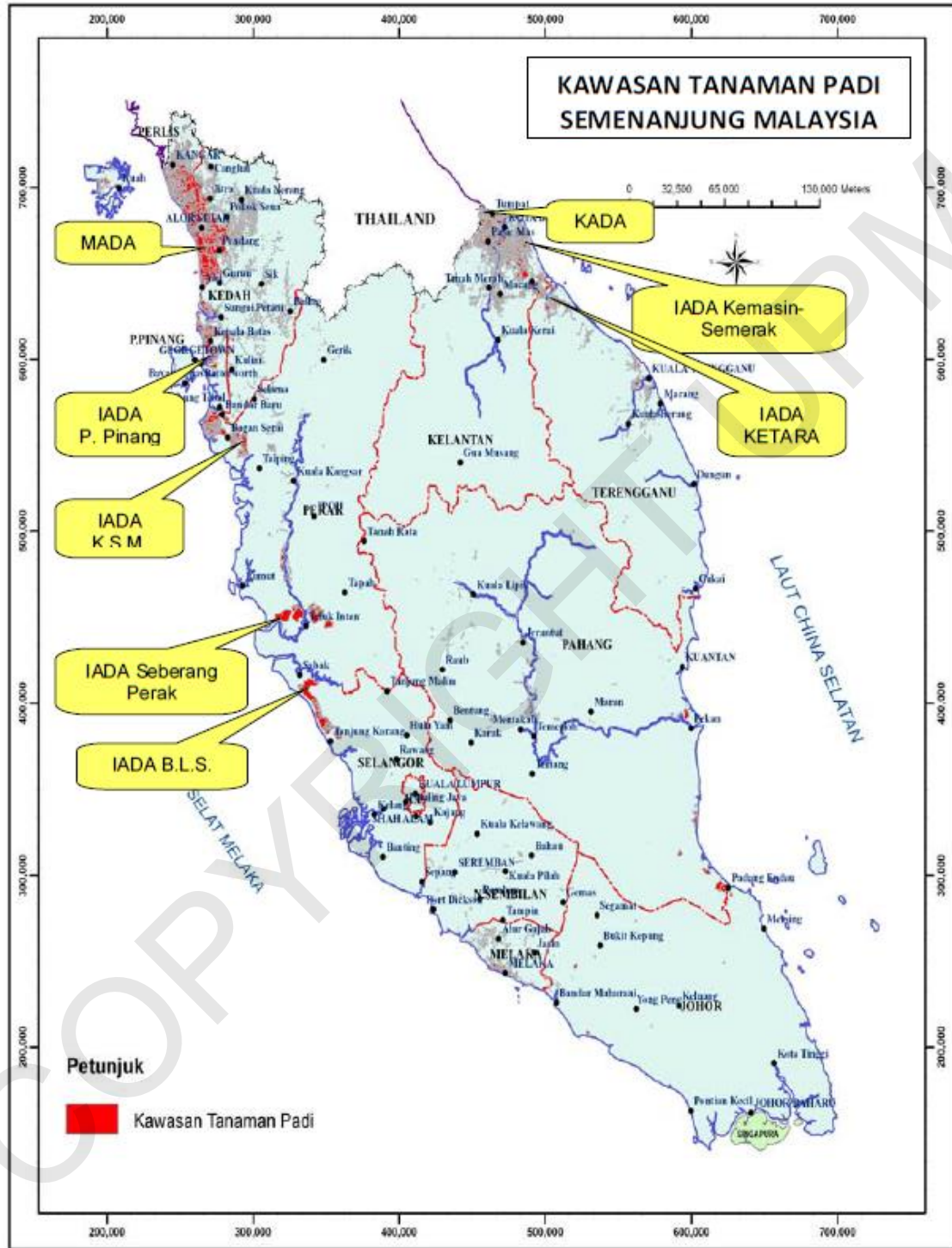
Table 1.2: Rice Importation by Country, Malaysia, 2013

Import Country	Percentage %
Vietnam	54.1
Thailand	19.3
Pakistan	12.6
Cambodia	9.6
India	3.6
Others	0.9



(Paddy Statistics of Malaysia, 2013)

Figure 1.2: Rice Importation by Country, Malaysia, 2013



(Paddy Statistics of Malaysia, 2013)

Figure 1.3: Map of the Granary Area in Peninsular Malaysia

1.3 Rice Check

Lacy and Steel (2004) state Rice check has led to great changes in rice production and extension delivery. Anon (2006) defined Rice check as an extension strategy that integrates relevant rice technologies and management option with farmers' existing knowledge.

Rice check commonly and suggested to be used by the people who are directly or indirectly involve in paddy production – farmer and extension agent (MADA, 2015). With the concept of guide in managing the paddy planting activities, individuals involved need to follow the ten main rice check in order to increase the yield and their income – (i) Identification of soil acidity, (ii) condition of paddy plots, (iii) control of weedy rice, (iv) irrigation schedule, (v) land preparation, (vi) sowing seeds, (vii) fertilization, (viii) water management, (ix) pest and disease control, and (x) harvesting.

This Rice check system been introduced in order to achieve national target of 10 MT/ha in every planting season to meet self-sufficiency and ensure food security.

1.4 Integrated Agricultural Development Area (IADA) Kerian

Integrated Agricultural Development Area (IADA) Kerian being established in 1979, the second largest of granary area in Malaysia after Muda Agriculture Development Authority (MADA) with 41,955 ha. IADA Kerian is located in north of the Peninsular Malaysia which covers the Kerian district – Selinsing-Semanggol, Bagan Serai-Beriah, Kuala Kurau, Tanjung Piandang and Bagan Tiang-Parit Buntar.

Table 1.3: Physical Size of IADA

Granary area	Area size (ha)		
	Paddy	Project	Agriculture
MADA	126,155	109,501	96,558
KADA	82,900	64,555	31,464
Kerian – Sungai Manik	66,282	30,560	27,825
Barat Laut Selangor	199,199	82,044	18,590
Pulau Pinang	104,636	67,095	10,138
Seberang Perak	17,307	16,437	8,529
Ketara	258,736	65,828	5,110
Kemasin Semarak	68,350	45,650	6,160
Total	923,565	482,580	204,374

(Department of Agriculture Negeri Perak, 2015)

1.4.1 Mission of IADA Kerian

To upgrade and construct irrigational infrastructure and drainage system to support productivity, increase yield and improve livelihood of the farmers.

1.4.2 Objectives of IADA

The general objectives of IADA are:

- 1) Reduce the difference in income with other sector through increasing the productivity level and maximize the income of target group.
- 2) Modernize the agricultural sector as to save the human's energy and able to compete in domestic and international market.

Specifically, IADA Kerian's objectives are in line with the local needs, these include:

- 1) IADA Kerian will be one of the important granary area in Malaysia with the average yield from 3.3 MT/ha to 5.5 MT/ha.
- 2) Increase the average income of farmers under IADA Kerian from RM700 to RM1,000 per month.

- 3) Increase the average income of entrepreneur from RM3,000 to RM5,000 per month.

1.4.3 Planning and Strategy

- 1) Establish a centralized management system (mini estate/real estate) of commercialized paddy crop through precision agricultural method and farm mechanization with the help and commitment from the agricultural agencies, entrepreneurs and farmers.
- 2) Combining small paddy fields which are not economical in context of production of paddy to be run by the entrepreneurs commercially through smart partnership with the farmer.
- 3) Streamlining the infrastructure system in the paddy fields including irrigation system, design structure of the paddy field and farm roads.
- 4) Authorize the agriculture center as “COE” through TOT.
- 5) Empower development program and delivery system.
- 6) Optimize the use of limited land with various type of crops, livestock or aquaculture as another source to generate income.

(Ministry of Agriculture & Agro-Based Industry, 2015)

1.4.4 Average Yield Production in IADA Kerian

Being the second largest granary area in Malaysia, still IADA Kerian being the sixth contributor to the national paddy production. There are numerous programs and approaches been developed by the government and related agencies to increase the yield production of paddy with the aim to fulfill the demand for the growing population and

increase the self-sufficiency level. IADA Kerian is below the National Average Yield (4.8 MT/ha) (DOA 2013) with the average yield 4.495 MT/ha.

1.5 Problem Statement

The government has set self-sufficiency level (SSL) of rice maintained at 70% under Agro-Food Nation Policy (DAN) 2011-2020 (Datuk Seri Ismail Yaakob, 2014). This explains why Malaysia still imports rice from other countries to cover the remaining 30%. To make sure there is food security, the government has established eight granary areas to achieve at least 90% self-sufficiency level production of rice (MOA, 2015). However, domestic rice production cannot cope the increasing population.

IADA Kerian being one of the largest granary areas, yet producing below national average yield. Evidence from Paddy Statistics (2013) shows that IADA Kerian produce (4.495 MT/ha) below the National Average Yield (4.8 MT/ha).

FAO (2006) as cited by Neda Tiraieyarie (2009) state that the effectiveness of extension services is also highly dependent on the ability of extension workers who are competent as the whole extension process is dependent on them to transfer information from extension organizations to the clients.

Hence this study is an attempt to investigate job performance of extension agents in relation of involvement level on objective setting, planning, implementing and monitoring stage which also responsible for the total average production of paddy in IADA Kerian.

Therefore, the related research questions for this research study are:

- 1) What is the level involvement of extension agent in the planning stage of Rice Check?
- 2) What is the level involvement of extension agent in the implementing stage of Rice Check?
- 3) What is the level involvement of extension agent in the monitoring stage of Rice Check?

1.6 Objective of Study

1.6.1 General Objective

The general objective of the study is to ascertain the involvement level that contribute to the job performance of extension agent on paddy production in IADA Kerian area, in relation to the Rice Check

1.6.2 Specific Objectives

The study also aims to achieve the following objectives:

- 1) Determine demographic of the respondents.
- 2) Identify the involvement level of extension agent in objective setting.
- 3) Identify the involvement level of extension agent in planning stage of Rice Check.
- 4) Identify the involvement level of extension agent in implementing stage of Rice Check.
- 5) Identify the involvement level of extension agent in monitoring stage of Rice Check.

- 6) Examine the work performance of extension agent.

1.7 Significance of Study

This research study has uncovered the perception of paddy farmers toward the involvement level of extension agent during planning, implementing and monitoring stage of Rice Check in IADA Kerian. Data obtained will help agriculture agencies, especially in Integrated Agricultural Development Area (IADA) Kerian to improve the involvement of extension agent in planning, implementation and monitoring stages in the rice field, so that can help to achieve nation target of 10 MT/ha of paddy yield production and achieve 100% self-sufficiency on paddy production.

This research study also revealed the latest demographic profile of farmer in IADA Kerian. The data obtained will help in measure the current performance of farmers and their yield production.

1.8 Assumption of the Study

This research study takes into considerable assumptions.

- 1) Rice Check system has been introduced and transferred to the clients by extension agent in IADA Kerian effectively.
- 2) Extension agent in the chosen extension area in IADA Kerian has been successfully gathered respondents with the given criteria.
- 3) The respondents are honest in providing their responses to the questionnaire.

1.9 Definition of Terms

Extension agent: a person who intervened to bring about change in order to help improve the lives of the farmers and their families.

Clients: a person who engages the professional advice or services of another.

Involvement: the fact or condition of being involved with or participating or the act of taking part in something.

Job performance: ability a person to perform effectively their job duties and responsibilities.

1.10 Thesis Organization

This thesis is comprised of five chapters. It starts with the introduction, followed by literature review, research methodology, results and discussions, and lastly conclusions and recommendations.

Chapter 1 Introduction: which entails background of the research study, problem statement, objective of the study, research hypotheses, significance of the study, assumption of the study also the definition of terms used in this thesis report.

Chapter 2 elaborate on previous researches which are used as references related with the topic of this research study. The topics focused on the concept of extension, principles of

extension, importance of extension, extension agent, roles of extension agent, concept of involvement, concept of job performance and Iceberg Model.

Chapter 3 is on research methodology. This chapter depicts on how the data obtained to be analyzed, which covers the design of the study, location of study, respondent selection, data collection, and analysis obtained data.

Chapter 4 discussed diligently about the result obtained from quantitative survey that has been analyzed using Statistical Package for the Social Science (SPSS). This chapter covers the result on demographic profile of the respondents also perception on involvement level of extension agent on four different involvement levels.

Chapter 5 is the last chapter which states the conclusion and recommendation on improvement for this research study. All the references and appendices were attached after the last chapter.

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