

Roles of Extension Agents Towards Agricultural Practice in Malaysia

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Abstract— It is expected that the income generated by paddy industry will increase up to 988 million per year. In order to achieve this, extension agents plays important role in educating farmers by encouraging them to learn, adopt new technologies and spread them to other farmers. To ensure the success of extension program, the agents should recognize their roles as change agents (as a catalyst, solution giver, process helper, and resource linker) and have ability to acquire competencies to accomplish these roles. Thus, this study aims to explore the level of roles among extension agents. Using a quantitative survey methodology, self-administered questionnaires measuring the roles of extension agents as change agents. A total of 117 extension agents had participated in this study. The extension agents were the officers from various agricultural departments and agencies who serve paddy farmers in Malaysia region in related to extension, marketing, financing, farmers association, production, and others. The finding showed that the level of roles among extension agents is high. Hence, the competency of extension agents in Malaysia is indeed especially as a change agents and one of the important determinants of success for agriculture industry in Malaysia. This study emphasized that in order to improve the performance of agricultural extension agents, one of the way is by getting to know their competencies, skills and abilities. The extension agents, Farmers, policy makers, researchers, academics and people working in agriculture can learn a great deal about what individuals and institutions need to do to develop farmers, personally and professionally.

Keywords— Roles; Change Agents; Extension Agents.

I. INTRODUCTION

The period of the 9th Malaysia (2005-2010) Plan marks the last 5 years of the implementation of the 3rd NAP. As far as paddy and rice are concerned, the target of the SSL had been charged from minimum of 65% to 90%. Hence, the productivity level for the granary areas has increased from 5.5 t/ha to 6.5t/ha. To achieve the target, the government of Malaysia launched the 10 t/ha project and emphasized on high yielding varieties (Abdullah, 2007). It not only covers aspects of commercial agriculture and biotechnology, but also emphasizes on agriculture as a business. Government is constantly looking for new initiatives to develop the agricultural sector and agro-based industries in order to ensure development of this area.

Many programs aimed at producing agricultural entrepreneurs so that they lead the planning for commercialization of food production in the agricultural sector to improve productivity and competitiveness in an increasingly competitive business world and global. The agriculture sector is being rapidly developed by the government includes agro-based industry achieved a total value added and the potential to create 128,000 new jobs in the next five years. Potential of this sector has no limitations if carefully cultivated. By 2020, the agricultural sector need be at the level of success helps build the image of a

developed country (10th Malaysia Plan, 2011-2015).In order to achieve national mission, extension agent plays an important role as the change agent to change farmers' knowledge, skills, and attitude. The role of the extension agents will be more of knowledge workers who would give advisory and consultancy services to farmers. Therefore, the purpose of this study is to identify the roles of Extension agents towards agricultural practice in Malaysia.

These effectiveness roles will be able to transform the knowledge of technical and technology to the farmers in order to improve and brings about desired behavioral change in farmers (Anaeto et al., 2012).In addition, there are several factors are influencing change agents and various agencies to consider sustainable agriculture practices. Farmers concern for effective and efficient use of their land is influenced by a variety of factors including personal views, family views, technology, profitability, complexity, public opinion, research, change agents, and marketing (Betru, 1998; Kotile & Martin, 1998).

II. BACKGROUND AND METHODOLOGY

A. Agriculture In Malaysia

Agriculture has played a key role in the development of Malaysia, resulting in the country becoming the world's leading palm oil producer and the third largest producer of

natural rubber. Agriculture continues to make significant contribution to the national economy. In 2003, the agriculture sector registered a growth of 5.5%, following in importance the manufacturing and the service sectors. In 2004, the government of Malaysia announced the agriculture sector to be the third engine of growth.

The government's policy towards agriculture focuses on increasing production, in order to achieve food self-sufficiency and develop exports. In 2005 the agricultural sector contribution was 9% of Gross Domestic Product (GDP); 4% of export tax; 6% of export earning and employed 13% of labour (Ninth Malaysian Plan, 2005-2005; Ten Malaysian Plan, 2011-2015).

Rice cultivation is the major food crop enterprise but priority agricultural systems throughout Peninsular Malaysia, Sabah and Sarawak are based on oil palm, rubber and coconut. Accounting for about 0.67 million hectare for all seasons in 2001 (MOA, 2003), oil palm, rubber, coconut and durian also occupy large areas in the agricultural cropping systems. In 2001, there were 3.63, 1.57, 0.15, and 0.12 million hectares of palm oil, rubber, coconut and durian, respectively. Together with paddy, these crops covered 97% of the cultivated agricultural land in Malaysia (DOA, 2003). The paddy development areas in Malaysia such as in Kedah, Selangor, Perak and Sarawak are indeed demanding the competency of extension officer in ensuring their paddy area is well developed (Hayrol, Azizan, & Azahari, 2010). The paddy plantation needs to be cultivated by new ideas and method so that this sector can be developed as a new source of income for Malaysia. This creates chances for Ministry of Agriculture and Agro-Based Industry as the policy maker to come with plans of action to intensify this sector as a dynamic and competitive sector. In order to intensify paddy industry, we need to enhance the roles and competency of the extension officer first.

B. Agriculture Extension

Agricultural extension can be defined as an ongoing process of getting useful information to farmers and assisting them to acquire the knowledge, skills and attitudes to use effectively the information and technology to increase productivity (Rahim, 2008; 2010). The effectiveness of extension services is also highly dependent on the ability of extension agents who are qualified, knowing their roles and competent as the whole extension process is dependent on them to transfer information to farmers. Extension services world-wide are organized on different principles. In some countries extension programs serve to transmit national directives to rural areas.

Rural areas are perceived to be highly traditional, resistant to change, and unaware of technological advances (FAO, 2006). Many extension approaches and strategies rely on technology transfer with top-down development without having a framework for feedback from farmers (Axinn, 1988). Avault (1984) believed that "any viable fisheries program must be built from the top down". In more recent years the shift has been towards greater farmer participation, although it is difficult, especially with a new technology, to have the patience to elicit farmer response. It is far too easy to assume the farmer does not understand. In addition, the value of extension agents was not what they

could do, but in what they could get other people to do (Knapp cited in Brenda Seevers, 1997). The extension officers', as well as Agricultural Extension Agents, must have increased technical competencies in more than one program area such as competencies across the entire organization, within job families and program areas (Stone, 1997).

C. Role of Extension Officer

What is role? According to McLagan, 1989, role is a major area of functioning which encompasses any number of competencies and outputs that a person can perform. In most of the time, most people can perform more than one role in their daily lives. For Armstrong (2003) he describes a role as part played by people in reach their objectives by working competently and flexibility within the contact of the organization's objectives, structure and processes. The definition given by Armstrong concerned about what people do and how they do it.

A role can be defined as a set of norms, values and interaction patterns associated with a given category of individuals (Anaeto et al., 2012). The role of extension officers' in the development of agriculture throughout the world is not in doubt. It has remained one of the prime movers in the development of agriculture sector. Hence, change agents refer to someone who deliberately tries to bring about a change or innovation (Havelock, 1973). By knowing the roles that one occupies, you can better understand what encompasses total performance.

In addition, role theory states that if a role is emphasized as important within a given context (such as work), then the role is more likely to be enacted. Therefore, role theory is used to suggest that if a role is emphasized as important at work, it is more likely to be enacted (Theresa et. al, 1998). The whole extension process is dependent upon the extension agent, who is the critical element in all extension activities. If the extension agents are not able to respond to a given situation and function effectively, it does not matter how imaginative the extension approach is or how impressive the supply of inputs and resource for extension work. Indeed, the effectiveness of the extension agent can often determine the success or failure on an extension programs (Oakley & Garforth, 1985).

Indeed, there is a wide variety of views on the extension agent's role can be examined:

1. An extension agent tries to arouse people to recognize and take an interest in their problems, to overcome these problems, to teach them how to do so, to persuade them to act on his/her teaching, so that they ultimately achieve a sense of satisfaction and pride in their achievements.
2. A change agent is a person whose primary role is to achieve a transformation of attitudes, behaviour and social organization.
3. A change agents are multi-purpose agents serving as links between government and people.
4. A change agents is a person who sets in motion a process of change after realizing that certain changes are necessary for the rural society.

5. A change agents is an activist whose main role is to help people from their own organizations in order to be able to tackle their problems.
6. A change agents is a professional who influences the innovation/ decision- making process in a direction deemed desirable by the change agency (Oakley & Garforth, 1985)

The success of extension services depends on the role of extension officers to transfer technology and technical competence in developing farmers to increase their productivity (Rahim, 2008). So far, the agricultural extension service in Malaysia can be considered as not sufficiently effective in developing agriculture since only focusing on the role of technology transfer and very little to the development of human resources. One of the main problems is the role and competency of personnel who have not satisfactory enough to deliver good services (Rahim, 2008).Based on the discussion above, focus of the study is to determine the level of roles among extension agents as change agents. Roles as change agents divided into four which encompasses role as catalyst, resource linker, solution giver, and process helper.



Fig. 1 Roles of extension agents changes agent

TABLE I
ROLE OF EXTENSION AGENTS AS CHANGE AGENT (RAHIM, 2008)

Role	Description
Catalyst	A person who significantly, resulting in something happens to serve our clients. A characteristic of extension agents as a catalyst for change is they have to know the latest technical knowledge as well as knowledge of human resource development. Extension agents should also regularly interact with client either in formal or informal situations. They must have a positive attitude toward work and always display a positive image to the client.
Resource Linker	A person who is able to identify and relate the resources internally and externally to meet the goal. Characteristics of extension agents as the source link extension agent should have a wide network of contact as

	well as simple and easy to be accompanied by friends and relatives. They need to exhibit behavior that is outgoing and must have a reliable method of communication.
Solution Giver	A person who aids, dependable and have a 'tract record' good in problems solving. Characteristics of extension agents to solve the problem they need to have knowledge and experience not only work-related matters but also the community. Extension agents also have always been source of client referrals. In addition, they have to be willing with the client regardless of the time and day and are willing and want to try even higher risk.
Process Helper	A person who shows a method or means of doing something and give clients the opportunity to implement it. Characteristics as assistant extension agent process should have the properties of a diligent and dedicated mentor. Extension agents also need to have confidence in the ability of his client. The important thing as a helper process, as agents of their development should not easily give up when faced with failure to always encourage clients to achieve the highest level.

D. Methodology

A sample of 117 extension officers from various positions in Malaysia participated in the study. Using a quantitative survey methodology, self-administered questionnaires measuring the roles of extension agents as change agents towards agricultural extension work practice in Malaysia. The questionnaire were distribute using drop and pick method to the extension agents.

III. RESULTS AND DISCUSSION

A. Level of roles among extension agents

The role of agricultural extension agents is to help farmers from logical opinions and to make sound decision by communicating with them and providing them within formation they need (Van den Ban and Hawkins, 1988)quote in (Thach, 2008). In developing countries, the majority of rural people have depended on extension agents for advice and technical information on agricultural and rural development. Table 2 depicts the level of roles among extension agents towards agriculture practice in Malaysia. The data in the Table 2 show that slightly more than one-half of the respondents (86.3%) indicate level of role as a change agents is high. A similar trend of findings was shown with the other element of role as a change agent namely, catalyst (85.6%), process helper (70.1%), resource linker (77.8%) and solution giver (58.1%). Extension agent is the middle person between research and farmer innovation (Rivera, 2008). Based on previous studies it was found that these skills should be belong by professional extension agents to carry out their roles and responsibilities effectively as change agents (Davis, 1963; Gonzalez, 1982; Keregero, 1981; Tea, 1980). Moyo and Hagmann (2000) in his study and the survey found that the role of extension agents is to facilitate learning designed. Study by Louise

(2008) does not support that the important role as a link source for PPP in delivering services more effectively and in a difference in the community and inspire and sustain a work environment. Moose, Brown and Warning (2006) states the role of extension agents is to improve work practices in the field, at home, in the community and society. Based on studies conducted in Iran by Karbasioun, Biemas and Mulder (2007) claims that agriculture extension services have help extension agents reach at certain level in the field of animal husbandry and veterinary, agricultural inputs and increased fertility and farm size.

Hence, future support needs greater competency encompasses socialization, emotional aspects and make farming more rewarding careers to extension agents. Due to the global environment has grown rapidly, the role of extension agents have also become more complex and interrelated in any of the programming which is one of the main approaches in the development of agriculture sector. For extension agents to work effectively they need a different mindset (Roya, 2012) to make a difference and make a change in the expansion. These changes can be done with a high level of understanding about the role of change agents among development officers.

TABLE II
LEVEL OR ROLES AMONG EXTENSION AGENT

Role	Freq/ (%)	Mean/ (SD)
Catalyst		3.60 (.377)
Moderate	18 (15,4%)	
High	99 (85,6%)	
Process Helper		3.47 (.418)
Moderate	35 (29,9%)	
High	82 (70,1%)	
Resource Linker		3.45 (.421)
Moderate	26 (22,2%)	
High	91 (77,8%)	
Solution Giver		3.33 (.433)
Moderate	49 (41,9%)	
High	68 (58,1%)	
Overall Roles of extension agents		3.46 (.344)
Moderate	16 (13,7%)	
High	101 (86,3%)	

IV. CONCLUSIONS

The competency of extension agents in Malaysia is indeed especially role as a change agents and one of the important determinants of success for agriculture industry in Malaysia. Roles as change agent are designed around the skills individuals and groups need to be effective in the future and are used for making human resources decisions. To be a competent extension agent, they should have the knowledge, technical skills and personal characteristics that lead to outstanding performance.

It seemed that the formal education and training that the Extension Agents had received contributed only part of their preparation for developing their competencies and professionalism in extension work. The everyday work contexts play an important role in developing extension agents professionalism.

The exposure to a variety of social interactions, events and experiences expands the opportunities to advance in one's extension career.

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