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Perceptions Level of Rural Leaders Towards Implementation of Agricultural Technologies in Malaysia Paddy Farming

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Abstract: Rural leaders in Malaysia have been encouraged to develop themselves with skills and knowledge. To encourage rural people to use agricultural technologies, they must have a good skill towards it Hence, the study was conducted to determine the perception levels of implemintation of rural leaders in area of study towards paddy farming technology. The sample size of this study is (260). The study was conducted in MADA (in a state of Kedah and Perlis). This study used a purposive sampling technique. This research also was done by interview approaches to gain the implementation perception levels of rural leaders of paddy farming technologies in MADA. Using SPSS, descriptive and inferential analyses were performed to fulfill the objectives determined. Based on the results gained, it can be concluded that implementation level of paddy farming technologies among respondents is moderate. Further analysis done have proved that there is a significant relationship between some social, demographic factors and respondents 'level of implementation of agricultural technologies, the study recommended that rural leaders in area of study access and exposure to agricultural technologies must be strengthened.

Key words: Rural leaders, implementation, agricultural technologies, paddy, skills

INTRODUCTION

Agriculture has grown to be one of the key factors for development in Malaysia. Within the 8th Malaysia plan and the 9th Malaysia plan, the agricultural region has recorded encouraginggrowth specific of, within the 9th Malaysian attention, agribusiness is tailored to be the third state of affairs generator for the country (Hassan *et al*., 2010).

Malaysia has a strong foundation for agricultural biotechnolog with it being the third engine of growth in Malaysia after the manufacturing and services sectors. Being the world leader in the production of several industrial crops, wind inducement fob off, rubber, cocoa, rain cats and tropical timber, Malaysia has a venturesome agronomy base (Abdullah, 2008).

This coupled with her rich biodiversity and strong Information and Communication Technology (ICT) infrastructure. Puts Malaysia in a valuable position to appetite ahead of in its goal of biotechnology as the next platform for economic growth for the country. Abet is emphasizing its description notice in the Malaysian for twopence. Agriculture provides relevancy for up to 40% of Malaysia's population (Lim and Lee, 2012).

To assist farmers demote in effort, storing and parceling out directorship, in systems disseminate serene technology and indicators hint. Technology has a function in inception, this process anent adept and working (Roling, 1990).

Extension directors have aggressively investigated approaches of the use of information generation to enable broader and deeper engagement with farmers. In peace building as properly, generation is also being followed to gather, analyze and distribute records. Drawing on the revel in of these domains in information generation, what technical abilities are important to assist a decentralized, participatory extension machine engaged in peace constructing? Generation affects two factors of extension agents' paintings. First, it affords information and support that improve the capacity of farmers to act. Second, it does the same for the sellers (Davis, 2008).

According to Robertson (2012), Lakhal and Hmida with suitable technology, each farmer and extension retailers can enhance the performance and reduce the risks related to their paintings successful statistics generation tasks in fragile environments share some of vital traits. First, they're never showcases only for the area but continually answer to a pressing problem facing a network. Second, they tend to be primarily based on m

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improving user get admission to a service or an asset as opposed to imparting ownership. Third, they have a tendency to be controlled to make sure the availability of services to all stakeholders in a community (Robertson, 2012).

Literature review: Paddy is one of the most important monetary crops grown in Malaysia. For you to grow the crop yields various forms of fertilizers were used. Furthermore, many forms of herbicides, pesticides and fungicides have also been implemented as crop manipulation measures to guard the crop from weeds, pests and sicknesses. Activities have been reported as contributorsto heavy steel pollutants in many agricultural areas and can also cause chemical degradation of the soil, as a result of accumulation of compounds with undesirable stages (Rashid, 2014).

System of manufacture for monetary reasons, they typically incorporate numerous impurities and among them are heavy metals. Moreover, heavy metals regularly represent sequestration and the active substances of pesticides (Khairiah *et al*., 2012).

Presently, agricultural inputs such as seeds, irrigation, fertilizers and insecticides had been applied as frivolously as possible over a given discipline, however the yield on the give up of the developing season frequently varies across the sector. Changes in soil texture, organic count, salinity, subsoil traits and water maintaining capabilities are all elements that may cause modifications in yield. Perhaps, it can be more reasonable to use distinctive quantities of agricultural inputs to sections of the field which has exceptional soil homes. To do that, correct field maps displaying how soil adjustments throughout the fields are needed (Chan *et al*., 2006).

To mention the least, the challenges dealing with rural groups and rural leaders are more and more complicated and substantially inspired through neighborhood activities in addition to international, political, social, cultural and monetary forces. those demanding situations have forced rural leaders to expand their information of the underlying causes of the troubles dealing with their groups, the range of possible outcomes and answers and the multiplicity of strategies for getting there even as a few of the abilities and attributes they have been encouraged by ordinary lifestyles and studies, others are an instantaneous result of formal and casual leadership development education and training (Williams and Lindsey 2011).

According to D'Silva and coauthors, Zhang and coauthors. For this reason, management is a purposive manner that's inherently cost-based. Consistent with the notion that management is concerned with change; the chief is basically a change agent. Leaders, then aren't always folks that simply keep formal management positions; on the opposite each person is capacity leaders.

The center piece is that leadership is ready carrier to others and the task of the group and now not to the task of the chief. Hit leaders have nice personalities and strong interpersonal competencies. They have a positive outlook and notice the sector in terms of demanding situations to be overcome, not barriers that block their manner. Powerful leaders are able to honestly communicate their vision and generate and facilitate a method that allows that imaginative and prescient come to life (Zaccaro, 2001).

In achieving towards that imaginative and prescient, right leaders are capable of making decisions and delegate and to make certain that after responsibilities or responsibilities are delegated, they're finished in a satisfactory way (Shin, 2004).

Leaders additionally should have the capability to narrate to a range of humans and personality kinds. They want so one can recognize and relate to nearly all people. Powerful leaders own trouble-solving skills. They are able to successfully deal with conflict and possess quite a number strategies to clear up conflicts. Whilst, they have the ability to speak properly, they have to additionally be keen listeners the majority of leaders who participated on this observe has embraced the perception of provider to and with others as one of the first-rate methods to recognize management (Flage *et al*., 2012).

They see being a presenter as being a servant. Numerous participants said: "To be an effective leader, you must have a civil servant mentality. You have to want to do your paintings because you need something higher for others, not only for yourself." some leaders in this bookit got here to these ways of questioning through studying works on servant leadership at the same time as others shared these same notions primarily based on their own studies (Mander, 2008).

How these leaders got here to their conclusions about management isn't always important: what is critical is that the majority of the rural leaders saw leadership as a shared method to be engaged in by way of passionate, sincere, truthful, visionary people whose hearts, minds and palms are all directed closer to making existence in rural communities higher, stronger and more vibrant (Williams and Lindsey, 2011).

The utilization of rural leaders is essential because of the following reasons (Isubikalu, 2007): Extension has an extended lifestyle of the use of leader in extension paintings. Extension employee as an interloper won't have whole expertise about different aspects of the village community nor they're purported to have comparable perceptions and emotions about village problems as local people may additionally have. Hence, there are proper motives to apply such folks who belong to the community.

Leaders with the aid of virtue in their effects can bring messages of improvement extra convincingly in the human beings's language. They are able to use arguments and forms of presentation most appropriate for the target population. They also can help to get social sanction for development. Except, they can also function mouthpiece of human beings earlier than extension workers; they could explain elaborately the desires and aspirations of humans.

Variety of extension people is proportionately some distance less than required. Consequently use of leader can aid to multiply effects of extension paintings conveniently and convincingly.

Leaders can assist in enlisting participation of human beings in programmers in their personal improvement. It's far viable to prepare humans round concrete troubles. Leaders can use their an impact and skills to bring humans collectively and empower them to take action for his or her improvement. Their critiques count number. They have people flock round them for information, recommendation or suggestion or in any other case impact members to motion. Such humans are known as leaders and such activity is called as leadership. They are also called power holders, men of power, power centers and power elite. If they are in some way related to improvement applications, the mission of improvement would grow to be very clean. Leadership is an act that causes others to behave or respond in a shared course (Bull, 2010). A rural leader is the one who can encourage, convince have an impact on and to motivate beneficial modifications. Bringing about alternate is an essential intention due to the fact most enhancements to demand a departure from habitual approaches. A rural leader creates an imaginative and prescient for others after which directs them closer to reaching that.A rural chief has fans who've self belief in him and give him a guide and dedication to an intention. This is what management virtually method (Jean-Marie and Normore, 2009).

Leadership in rural areas is one of the keys of dynamic pressure that motivates and captures the cooperation of human beings. A rural leader needs to have a magnetic persona. Persuasion is some additional key component of leaders function. A presenter should often get human beings to alternate their minds or take moves that they had no longer taken into consideration. Affect is synonymous with leadership.

Leadership is consistently described as the manner of influencing others to reap targets. He affects others to perform things like taking over more responsibility, attaining excessive satisfactory requirements and raising moral requirements. Many leaders, lamentably in rural regions have an effect on group participants to interact in bad, unethical acts that harm the community in the end.

Leaders are required to inspire their fans to paintings more difficult. Pinnacle rural leaders are typically difficult as their jobs are immensely demanding of time, concentration, sheer grindingpower and physically tiring. He is meant to make selections on his personal, robust willed, bold, lively and inspired with the aid of energy. He's full of braveness, emotionally and physically sturdy and has the capacity to empathies with others. He is sensitive to different people's desires, values, cultures, ideals and lifestyle. He's taking on the obligation and is credible. He's reliable and dependable to his followers. A terrific rural chief has all of the relevant understanding, keen mind, analytical capability. He has excellent interpersonal competencies with sound relationships with rural people. He's completion of power. Hence, there is necessary to find out what rural leaders' perceptions are with regards to applying selected sustainable agricultural technologies. Agricultural technology has defined as any behavior or practice that involves the interaction of individuals within the production system. For the purpose of this study, sustainable agricultural technologies are present as technologies which promote the sustainability of rice cropping systems. This study proposes contributing to the existing literature by providing an empirical analysis of the possibility of applying sustainable agricultural technologies from the view points of paddy farmers. The results obtained in.

The objectives of the study: Based on the above literature, this study aims to explore the level of implementation of technologies of rural leaders and to seek the differences between selected demographic factors and perception towards rural leaders. Consequently, it is hoped that this study would add to the knowledge of rural leadership. The specific objectives of the study were:

- To study the socio demographic characteristics of the respondents
- Identifying the perception levels of implementation of paddy farming technologies of the respondents

- Determine the relationship between socio demographic factors and perception level of implementation for the respondents on paddy farming

MATERIALS AND METHODS

The study was conducted in MADA (In state of Kedah and Perlis). This study used purposive sampling technique, the sample size of this study is (270). The respondents was selected 60% from the total of rural leaders which were 460 respondents from MADA. Due to the incomplete data and the number of sampling technique in this study became (260) respondents. According to Krejcie and Morgan table, when the population is 460 the sample size of this study will be 210 respondents but we take already mora than half of respondents in area of study. This research employed a quantitative survey method to obtain data. The data were gathered through a face-to-face interview based on a structured questionnaire. A 5 point Likert-scale was used to determine the dependent variable of respondents' perception.The data collection process started in April and was completed in June 2015. The instrument was designed by the researchers based on previous literature and was pre-tested in order to ensure the item's reliability and validity and to ensure it can easily be comprehended by the respondents. The Cronbach alpha value obtained for all the implementation level was (0.834) exceeding recommended threshold. To return the questionnaire as required. SPSS Software was used to analyze the data collected, statistics such as frequency, percentage, mean, standard deviation and q^2 was used and 5% significant level was used in this analysis. The $p<0.05$, shows that a relationship between variables.

RESULTS AND DISCUSSION

Table 1 indicate the descriptive analysis results. The majority of respondents at age between 43-48 years old follow with 25.8% between age (49-54) years old and the remaining 19.6% were respondents in the age above (55) years old. Table 1 shows the respondents' level of education 30.4% of respondents in MADA has secondary levels. Only few of them have further studied in certificate, diploma and degrees. As for length of functional service 32.4% have (15-19 years) in functional service as rural leader and the remaining 16.7% of the respondents have (above 20 years) of functional service as a rural leader. Data in the table also shows the number of (64) Of the respondents have (3-5 acres) of the size of land while 15.8% of the respondent have (6-8 acres) of the size of land but only 22.7% of the respondents have above (12) acres of the size of land. For the yield of paddy table shows 25.4% of the respondents have (3-5 tons) of the yield of paddy and 20.8% of respondents have (6-8 tons) yield of paddy but only 15.8% of the respondents have (above 12 tons) yield of paddy. Table 1 presents the total of the paddy income of the respondents, 31.5% of the respondents they earn only about below (RM 1000) income of paddy income, then 32.3% of respondents they earn between (1100-2000) income of paddy income and 36.2% of the respondents they earn between (RM 2100-3000) income of paddy income.

Table 1: Profile of the respondents

Characteristics	Frequency n (260)	Percentage
Age (years)		
31-36	66	25.4
37-42	53	20.4
43-48	67	25.8
49-54	51	19.6
Above 55	23	8.8
Level of education		
No education	29	11.2
Primary level	62	23.8
Secondary level	79	30.4
Foundation	35	13.5
Diploma	14	5.4
Length of functional service (years)		
5-9	61	23.3
10-14	70	26.6
15-19	85	32.4
above 20	44	16.7
Size of lands (acres)		
Below 2	36	13.8
3-5	64	24.6
6-8	41	15.8
9-11	60	23.1
Above 12	59	22.7
Yield of paddy (tons)		
Below 2	55	21.2
3-5	66	25.4
6-8	54	20.8
9-11	44	16.9
Above 12	41	15.8
Paddy income (RM)		
Below 1000	82	31.5
1100-2000	84	32.3
2100-3000	94	36.2

Table 2 shows the level of the implementation of respondents on paddy farming technologies is shown the item with the highest mean (4.06) is "You use the tractor to facilitate services in your farm". This means that rural leaders could use and resolved any problems about tractor if they faced it at any stage of the paddy farming. The results also report the item with the least mean (3.23) is "You collect rice straws after threshing. This means the respondents do not have enough skill to collect rice straw after a thrashing.

Table 3 displays the overall mean for the perception of implementation level of respondents on paddy farming technologies is 3.77. The highest level is moderate at

Table 2: Perceptions toward the implementation of respondents on paddy farming technologies

Statements of implementation	Frequency (%) 1	2	3	4	5	Mean	SD
You use the tractor to facilitate services in your farm?	3.8	1.1	8.4	57.4	28.1	4.06	0.872
Have you used rice varieties resistant to diseases?	2.7	6.8	14.1	60.5	14.8	4.03	0.788
You wish to spend more time using transplanting machines in your farm?	1.1	1.5	17.9	51.3	27.0	4.02	0.859
You use pesticides use in appropriate time	2.3	3.4	11.4	54.8	27.0	3.98	0.800
You do burning rice straws after threshing	1.5	3.4	13.3	58.2	22.4	3.98	1.034
You using the recommended extent of seed for each of rice varieties	1.5	7.2	25.1	39.2	25.9	3.93	0.997
You using herbicides in appropriate time and according to the recommended extent	1.5	4.6	25.9	47.1	19.8	3.92	0.951
You tried to use pheromone traps to control pest	4.9	13.7	38.4	34.2	7.6	3.91	1.013
You doing eliminating breeding sites of pests	2.3	4.9	19.0	49.0	23.6	3.88	0.909
You farming alternation in order to control rice pests	2.7	8.0	27.8	40.3	20.2	3.87	1.023
You face some of the barriers when you are using a variety of seed like MR256 or CLXX in your farm?	3.4	10.6	28.1	41.4	15.2	3.85	1.004
You try to use rather varieties of rice?	4.2	15.6	39.9	31.2	8.0	3.83	1.124
You struggling the diseases that afflict emerging paddy crop in your field?	5.3	9.9	10.6	43.7	29.3	3.82	0.957
You practice planting of rice varieties resistant to pests and diseases	2.3	9.5	24.7	35.0	27.4	3.80	0.865
When farmer are using tract, do you feel you have adequate visibility into what they are doing?	3.4	5.3	17.1	36.9	36.1	3.79	0.877
You using proper management of gram water?	2.3	8.4	19.4	40.7	28.1	3.77	1.034
You tried to use new fertilizers to control rice weed	3.0	8.0	13.3	45.2	29.3	3.71	1.050
You using rice varieties resistant to diseases?	3.0	8.0	16.3	42.6	28.9	3.68	0.976
You practice deep plowing after harvesting the paddy	3.0	6.1	16.3	43.0	30.4	3.55	0.991
You avoiding spraying during activities of beneficial insects	3.8	20.2	35.0	28.1	11.8	3.26	0.963
You tried to use proper management of farm water	2.7	4.6	19.0	44.1	28.5	3.24	1.032
You doing collecting rice straws after threshing	3.0	10.6	22.8	38.0	24.3	3.23	0.956
Total average mean						3.77	000.9

Table 3: Level of implementation of respondents of paddy farming technologies (n = 260)

Level	Frequency	Percentage	Mean	SD
High (3.67-5.0)	20	7.7	3.77	0.95
Moderate (2.34-3.66)	165	63.5		
Low (1-2.33)	75	28.8		
Total	260	100.0		

Table 4: Relationship between farm profiles and perception level of implementation (n = 260)

Variables	Chi-square ($X^2_{0.05}$)	Df	Significance	Decision
Age	8.310[a]	8	0.404	Fail to Reject H_o
level of education	13.914[a]	10	0.177	Fail to Reject H_0
Length of functional service as a (Rural leader)	15.921[a]	6	0.014	Reject H_0
Size of lands	20.952[a]	8	0.007	Reject H_o
Paddy income	2.634[a]	4	0.621	Reject H_o
Yield of paddy	15.847[a]	8	0.045	Reject H_o

63.5%. While, for high level is 7.7% and the percentage of low level is 28.8. For the perception of implementation level of respondents of paddy farming technologies. This result agree with study.

Table 4 shows the relationship between socio demographic factors and perception level of implementation of respondents on paddy farming technologies. Based on Table 4, there is no significant relationship between (age, level of education and paddy income) with the perception level of implementation of respondents of paddy farming technologies. Length of functional service as a (rural leader) has a significant relationship with the implementation perception level of respondents of paddy farming technologies because when the respondents have long functional service as a (rural leader) they have more ability to apply a new technology on paddy farming and as they are rural leaders they are first people they receive new technologies from agricultural agencies and after they adopt the technologies they transfer it to other farmers. This results agree wirh study. Size of land also has a significant relationship with the implementation perception level of respondents on paddy farming technologies maybe because most of the respondents they have >5 acres of lands so when they have big size of land they try to apply new technologies to have good and much harvest. And last variable is significant with implementation level is the yield of paddy maybe because they try to use new technologies of paddy to have good quality of yield of paddy this results don't agree with study.

CONCLUSION

The findings of the q^2 analysis showed that there was a significant relationship between social, demographic and implementation level of respondents of paddy farming technology. Based on the mentioned results, it can be concluded that the respondents had a negative perception toward some paddy farming technologies such as using rice varieties resistant to

diseases; practice deep plowing after harvesting the paddy; avoiding spraying during activities of beneficial insects;you tried to use proper management of farm water; and you collect rice straws after threshing. It is mean that rural leaders don't have good skill to apply new technologies in paddy farming. Extension agents need to teach them the correct methods of using these technologies. To improve such perceptions it is recommended that extension should use special channel such as result demonstration fields, TV program, field day and conducting visits to rice research station and low external input used farm consolidation, integration and drainage, livelihood and reduce input overuse. Rural leaders had a weak perception towards intangible impacts of modern techno technologies on soil, water and the environment. They must think about such important issues.

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