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SMARTPHONE USAGE BEHAVIOR AND TECHNOLOGY ACCEPTANCE IN OIL PALM REPLANTING

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ABSTRACT

Replanting activities need support using information technology so that plantation business actors can access information related to plantations independently and accurately. This research analyzes smartphone usage behavior using a technology acceptance model approach among oil palm users. This research was conducted at the Karya Dharma III Village Unit Cooperative, Keranji Guguh Village, Koto Gasib District, Siak Regency. The sample taken in this research was 30 planters. The sampling technique in this research uses a snowball sampling technique, which is obtained through a rolling process based on the relationship between one respondent and another. Snowball sampling is a sampling method that uses initial illustration data to identify other illustrations that meet the criteria. Data analysis was carried out using a descriptive study based on a Likert scale. The final results of this research show that using smartphones among oil palm planters in Keranji Guguh Village as a medium to help search for and receive information for oil palm planters is classified as moderate, with an average score of 2.84. Smartphone use has become an alternative media planters use to search for information on supporting oil palm rejuvenation activities, land clearing, planting spacing patterns, using superior seeds, and plant maintenance replanting.

Keywords: Information Access, Technology Acceptance Model

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INTRODUCTION

Palm oil is one of the plantation commodities that play an essential role in Indonesia's economic activities. It produces vegetable oil, which is much needed by the industrial sector. Palm oil has expanded to various uses, including cooking oil, industrial oil, and biodiesel fuel. Based on data from the Central Statistics Agency in 2018, Indonesia is the world's largest producer of palm oil products. Most Indonesian palm oil is exported abroad, and the rest is marketed domestically (Nurkholis & Sitanggang, 2020). The current area of oil palm plantations in Riau Province is 2,537,375 ha (Badan Pusat Statistik of Riau Province, 2019). Siak Regency is the fourth largest palm oil producer in Riau Province. Siak Regency consists of 14 sub-districts, each with an oil palm plantation. The sub-district that has quite extensive oil palm land is Koto Gasib District, with an oil palm plantation area of 26,577.60 ha and plantation production of 98,676.80 tons (Badan Pusat Statistik of Regency Siak, 2022). Oil palm rejuvenation is an effort to develop smallholder oil palm plantations by replacing old or unproductive plants with new plants and good seeds. As a guideline in rejuvenation, if the weight is less than 10 tonnes/ha/year, it is appropriate to rejuvenate. At the age of 25 years, the stem height reaches 12 meters, making it difficult to harvest (Rizka, 2022). Oil palm planters have realized that oil palm plantations will undergo rejuvenation. To realize the plantation revitalization program, communication is needed that can be conveyed well to oil palm planters who have joined as members of the Karya Dharma III Village Unit Cooperative in Keranji Guguh Village. According to (Siregar & Usriyah, 2021), A smartphone is a small computer with telephone functions. The increasing demand for portable and advanced devices has led to significant advances in processing, storage, displays, and operating systems (Daeng et al., 2017). Smartphones currently being developed can connect without being limited by distance, space, and time, with better capabilities than cell phones. Recent growth in mobile telephone and mobile-based information services in many developing countries provides opportunities to reduce costly and incomplete information dissemination in the agricultural sector and ensure the efficient functioning of markets (Owusu et al., 2017).

Communication, the process of conveying or receiving messages, has evolved with the advent of digital media. Smartphones, in particular, can revolutionize how information is conveyed to oil palm planters. These devices offer a wealth of information in an attractive and multifunctional format, with audio and visual elements that capture the user's attention.

The presence of this smartphone can provide various benefits for its users, especially for oil palm planters. The more sources of information that oil palm planters get, the more knowledge about oil palm farming will increase. Awareness of the importance of digital literacy can at least provide awareness for exchanging information in agriculture. Oil palm growers rely on experience passed down from generation to generation and on counseling from the local government to obtain information related to farming. This condition requires support using information technology so that agricultural business actors and extension workers can access information related to agriculture independently and accurately. The birth of a digital knowledge-based innovation certainly brings changes that significantly impact many groups and all aspects. In particular, in the plantation sector, this is an essential and very diverse problem. The ability to apply digital technology, such as smartphones, and adapt to innovative, creative, and initiative changes is needed. As time passes, the emergence of the internet and social media should make it easier for oil palm planters to obtain information, not as a replacement for conventional literacy but as a more functional complement to current developments.

The research was carried out at KUD Karya Dharma III Kampung Keranji Guguh. The location was chosen because KUD Karya Dharma III operates in the oil palm sector and has rejuvenation activities, which are the criteria for the research objectives. Communication can be done directly or indirectly, such as by cell phone. Cell phones are currently the most widely used communication medium in society. Apart from technological advances, cell phones have also developed. Initially, they were only used to sending and receiving messages or making and receiving telephone calls. However, they are now equipped with internet capabilities and functions like computers, making smartphones considered. Oil palm planters' poor digital literacy skills will also harm the information they obtain. Awareness of the importance of digital literacy can at least provide awareness for exchanging information in oil palm plantations. The age of oil palm plants has entered an unproductive period, so oil palm planters who join as members of the Karya Dharma III Village Unit Cooperative in the Keranji Guguh Village area, Koto Gasib District, Siak Regency, Riau Province, carry out replanting or what is called rejuvenation. Planters face difficulty in revitalization. They must not only rely on information from village unit cooperatives, farmer groups, and agricultural extension workers but also comprehend resource demands, obtain agricultural information, and distribute it. Understanding farming appears to be a custom that can only be carried out via experience without developing new literacy skills that can provide oil palm growers with new perspectives and higher profits.

RESEARCH METHOD

The research was conducted at Keranji Guguh Village's Karya Dharma III Village unit cooperative. The cooperative works in the oil palm growing industry, and the primary reason this place was picked for the research was picked for the research was because it meets the criteria for rejuvenation activities. The cooperative has carried out replanting or replanting oil palm plantations, which are entering the second stage, starting in 2014, out of the proposed 800 hectares, of which more than 620 hectares have been realized. Second, the cooperative has 312 members. Third, the cooperative manages 622 ha of land. In this replanting process, all requirements must be completed in digital format. To facilitate the process of digitizing the file, KUD managers assist farmers. For this reason, using smartphones significantly helps smooth communication and accelerates the completeness of replanting requirements.

This research is a survey research. This research was carried out for six months, from January to June 2023. The data collection method consisted of direct observation of the situation and condition of oil palm planters in Keranji Guguh Village, structured questions and answers from the planters, and questionnaires providing written questions to growers. The variable indicators of the farmer characteristic variables consist of age, education level, number of family dependents, farming experience, land area, and cosmopolity. Indicators of the smartphone technology acceptance model variables are perception of ease, perception of usefulness, attitude of use, behavioral interest, and actual conditions of users. The sampling technique used in this research was the snowball sampling technique. The answer choices in questionnaires are made in stages, from the lowest to the highest. A descriptive analysis based on the Likert scale described the extent of smartphone use behavior by oil palm planters in Keranji Guguh Village. Five categories are grouped: very high, high, medium, low, and low. Determining the category of the level of implementation of planter rejuvenation. This can be done using the following formula:

$$\text{Range} = \frac{\max imum score - \min imum score}{number of\ scales} - 0.01 = 0.79$$

Table 1. Likert Scale Answer Alternatives

Score	Scale Range	Category
1.00-1.79	1	Very low
1.80-2.59	2	Low
2.60-3.39	3	Keep
3.40-4.19	4	Tall
4.20-5.00	5	Very high

Source: Data Processed (2023)

RESULT AND DISCUSSION

Description of KUD Karya Darma III

In 2015, Keranji Guguh Village changed to Keranji Guguh Village after the issuance of Siak Regency Government Regulation Number 1 of 2015 concerning changing the village's name to Kampung. Keranji Guguh Village is a regional development work unit that focuses on the oil palm plantation sector. Keranji Guguh Village is a former transmigration settlement unit based in Pangkalan Pisang Village named Afdeling III Sei Buatan, which was previously headed by a settlement unit (KUPT). 1985-1988 and approximately 1988-1989 were headed by a temporary official (PJS), namely Mr. H. Muhajir. Before it was called Keranji Guguh Village, there was a tree called Keranji, located near Lake KM—52, now an oil palm plantation area, where the Keranji trees are large and sturdy. Then, the community held the Keranji tree felling. Because it is too big and sturdy, people have difficulty logging in. So the word "sturdy" was changed to "guguh" and is called Kampung Keranji Guguh today. Karya Dharma III Village Cooperative Unit is located in Keranji Guguh Village, Koto Gasib District, Siak Regency, Riau Province. Based on the members' meeting on April 1, 1986, they applied to the cooperative department to form an economic institution named "KUD Karya Dharma III," officially registered and received approval from the regional office of the Riau cooperative department. The business units developed by the Karya Darma III Village Unit Cooperative are food service units through cooperative service places (TKP), spray/fertilizer equipment, fresh fruit bunch transportation units (FFB), and convenience stalls (WASERDA).

The principles and objectives of KUD Karya Dharma III are as follows: cooperatives based on family and cooperation, cooperative aims, developing an ideology of cooperative life, developing member welfare, and developing the economic, power, and business capabilities of members to increase their production and income.

Village unit cooperatives are institutions that accompany planters in Keranji Village, which is enthusiastic about implementing oil palm rejuvenation. Based on the work plan and budget for income and costs for the 2022 financial year that have been determined, the management, with the assistance of all members, has carried out the mandate mutually agreed upon. The management performs daily activities based on the decisions made by Chairman H. Zainuddin, Secretary Abu Samah, and Treasurer Riano. Carrying out audits and preparing financial reports is handed over to the KUD management accountant and the supervisory body. As of December 31, 2022, 312 members comprised 259 men and 53 women.

Respondent Characteristics

Characteristics are traits or traits from within a person or outside that can be seen from their mindset, attitudes, and actions around where they live. These respondent characteristics describe the respondent's presence at the research location. These characteristics describe the condition of respondent growers in the research location. The characteristics of farmers as actors who play an essential role in farming activities reflect behavior that describes the motivation, personal characteristics, self-concept, values, knowledge, and skills brought by a farmer who performs superiorly in farming. The success of farming is very dependent on the competence of the farmer as the primary manager. As for an explanation of the condition of the respondent's description, the characteristics of the respondent are needed to obtain information. The findings from five selected provinces in China explain that a Probit model reveals that education, health condition, asset ownership, income levels, peers' smartphone usage, internet access, cooperative membership, access to credit, and off-farm work participation are the main factors driving smartphone usage of rural farmers. The age of the farmer rather affects smartphone usage negatively and significantly. Further heterogeneous analysis shows that the influences of factors on smartphone usage vary across the survey provinces (Ma et al., 2023).

Age is a unit of time that is used as a measuring tool for the existence of a living or dead creature (Prasetya & Putro, 2019). The age of the planter is the factor most closely related to the strength and ability of the planter to carry out plantation activities. The workforce aged 0-14 years is not yet productive, 15-19 years are not fully productive, 20-54 years are in the productive group, 55-64 years are in the entirely unproductive group, and >65 years are in the non-productive group. Education is the education that oil palm grower respondents have completed while attending formal school or college. According to Rachmat (2016), the level of education can be classified into three, namely: (1) low level of education: illiterate-elementary school, (2) medium level of education: complete elementary school complete high school, and (3) high level of education: complete academy/ College. It can be concluded from the research results that the majority of growers who dominate in this research, namely those aged over 20-54 years, are included in the productive group of planters, with productive-age planters having the potential to more easily adopt and accept new things so that they can build and develop farming businesses. Palm oil is carried out.

The number of family members is the total number dependent on the family. The number of family members will influence the level of income and expenses to meet their living needs. The more family members are supported, the more expenses must be met, increasing income on and outside the farm. If the family burden is more significant, the motivation to work hard to meet the family's needs and make more significant sacrifices to obtain better results is greater (Riawati, 2016). Land area is a benchmark for measuring the success and

income of planters (Arimbawa & Widanta, 2017). The research results show that the responsibilities of oil palm plantation families in Keranji Guguh Village are as many as 3-4 people. The farmer respondents have dependents relatively moderate, and this is expected to reduce the economic burden on growers because the more dependents a planter's family has, the greater the needs that must be met, the less the number of family responsibilities, and the less needs are spent (Riawati, 2016).

Farming experience is the length of time a farmer has carried out farming activities. Farming experience will influence the success achieved by growers. The longer you practice farming, the more knowledge and skills you gain. Farming experience plays an essential role in the oil palm farming process. The longer the farming experience, the better the process of allocating production factors so that farming will be better. A person's skill level can influence how they manage their farming business; the more skilled they are, the better the results will be obtained, and the income received from the farming business will be higher. Cosmopolitan is the activity of planters leaving or going outside the region, village, or Gapoktan to seek information primarily related to implementing oil palm rejuvenation. The cosmopolitan level of planters can be determined by the frequency with which they leave their village to go to other villages or cities. This frequency includes outreach or planters meeting members or figures from other planters outside their area. Planters who actively seek information will increase their knowledge and get new ideas that can help in the farming activities of oil palm planters. The data collected in this research consists of primary and secondary data. The primary data collected consists of:

Table 2. Variables And Indicators Of Characteristics Of Oil Palm Replanting Planters In Keranji Guguh Village

Variable	Indicators
Farmers' characteristic	Age Education level Number of family dependents Farming experience Land area Cosmopolitan

Source: Tondang et al. (2022)

Smartphone Usage Behavior

Research on farmers' communication behavior was conducted by (Handayani et al., 2021), which showed that farmers' overall knowledge was in the high category, farmers' overall attitude in communicating was in the high category, and farmers' overall communication skills were in the high category. Several models were built to analyze and understand the factors influencing the

acceptance of technology use. Technology is innate to modern society and primarily embodies human intellect. It dramatically influences development, societal functioning, and sociotechnical transitions (Murthy & Mani, 2013). The technology acceptance model, developed from psychological theory, explains smartphone user behavior based on belief, attitude, intention, and user behavior relationship. This model aims to explain the main factors of user behavior toward user acceptance of technology (Simanjuntak & Sabrina, 2015).

Table 3. Variables And Indicators Of Technology Acceptance Model For Oil Palm Replanting Planters In Keranji Guguh Village

Variable	Dimensions	Indicators
Technology acceptance model	Perceived Usefulness	Using a smartphone is easy Interaction is clear and easy to understand Learning smartphones is easy Overall Easy
	Perceived Ease of Use	Increased performance Effectiveness Increased Productivity Increased
	Attitude Toward Using	Convenience of interaction Love to use smartphones Not bored using smartphones
	Behavioral Intention to Use	Using a smartphone because of helpful features Try using continuously Continuing in the future
	Actual Use	Frequency & duration of smartphone usage time The real use of technology in replanting activities

Source: Data Processed (2023)

Perceived Usefulness

Perceived ease of use is the degree to which someone believes the technology is easy to understand. Perceived ease is the extent to which a person believes using a technology will be effortless. If someone believes an information system is easy to use, he will use it.

Table 4. Recapitulation Of Smartphone Ease Of Use Score

No	Description	Average Score	Category
1.	Using a smartphone is easy	3.33	Moderate
2.	Interaction is clear and easy to understand	3.43	High
3.	Learning smartphones is easy	3.23	Moderate
4.	Overall Easy	3.50	High
	Total score	13.49	
	Average score	3.37	Moderate

Source: Data Processed (2023)

Use f Smartphones in Rejuvenation Activities

The average score of 3.33, with the medium measurement standard category, explains that the planters have no difficulty using smartphones to communicate online; oil palm planters are helped by smartphones as a technology provide information that is proven by the number of interested planters to take part in rejuvenation starting from the socialization stage. With an average score of 3.43 and a high measurement standard category, this indicator describes how smartphones help growers understand the information needed. The application that gardeners use to help understand information is WhatsApp. The management of KUD Karya Dharma III created a WhatsApp group, "Group KUD KD III," to make it easier for farmers to interact online. An average score of 3.23 was obtained in the medium measurement standard category from the interviews with planters aged over 60 years old. There are difficulties in using smartphones, usually for older planters to ask their family members for help using a smartphone.

Planters' Ability To Learn Smartphones During Rejuvenation

An average score of 3.23 on the indicator for ease of learning to use smartphones places it in the medium measurement standard group.

Interviews with planters over 60 reveal significant difficulties in using smartphones; these older planters typically rely on family members, such as school-aged children, for assistance. This finding is consistent with Ginting's (2015) research, which observed that planters often depend on those around them, such as their children, to access the internet. Furthermore, obtaining information among these planters typically involves direct communication with other planters. Farmers in planter groups often receive information through these groups or from other planters in nearby villages.

This finding aligns with broader studies on technology adoption in rural areas, particularly in agricultural settings, which frequently indicate that older individuals face more significant challenges in adopting new technologies, such

as smartphones. A comparative analysis across different agricultural sectors could further contextualize these findings, highlighting whether this difficulty among older individuals is widespread or specific to particular contexts. Understanding these patterns of technology adoption and the factors influencing them is essential for developing targeted strategies to enhance digital literacy and facilitate broader acceptance of technological tools among rural agricultural communities.

Overall The Smartphone Is Easy To Use

Based on the average score of 3.5, the overall indication for ease of smartphone usage falls into the high measurement standard group. This score suggests that many advanced gardeners find smartphones relatively easy to use. Farmers utilize smartphones not only for agricultural purposes but also as tools for entertainment and maintaining connections with distant relatives. This finding aligns with Yulida et al. (2019), who highlighted using digital media to entertain and build social networks. Additionally, smartphones help growers access and understand the information they need for farming. However, exploring which specific features or functions the farmers find easy to use remains essential. To further facilitate communication and information sharing among farmers, the management of KUD Karya Dharma III created a WhatsApp group, "Group KUD KD III," which serves as a platform for planters to interact online. This initiative reflects an effort to leverage familiar and user-friendly digital tools to enhance connectivity and collaboration among the growers.

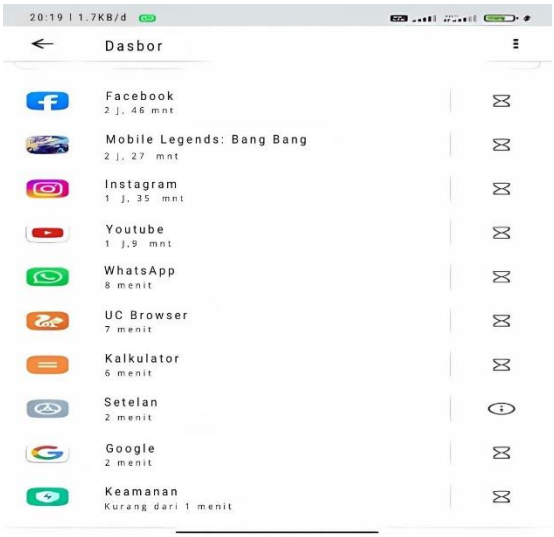

Figure 1.
Features Used By Respondents To Obtain Agricultural Information
Source: Dashboard Of Farmers' Smartphone (2023)

Table 5. Recapitulation Of Smartphone Usability Perception Score

No	Description	Average Score	Category
1.	Increased performance effectiveness	2.43	Low
2.	Smartphones provide information on how to increase productivity through the replanting system	2.90	Moderate
3.	Smartphones increase knowledge more tentang peremajaan	3.13	Moderate
	Total Score	8.46	
	Average Score	2.43	Moderate

Source: Data Processed (2023)

Perceived usefulness is the desired benefit of a technology to make work more effective. It means the extent to which a person believes using a particular information system will improve their performance. The results of measuring perceptions of the usefulness of smartphones in rejuvenation activities in Keranji Guguh Village are included in the medium category, with an average score of 2.43.

Based on Table 3., it can be seen that Perception of Usefulness (PKG) has an average score of 2.43 in the medium category. This is different from the research results of Sukma et al. (2020), which found that the perceived usefulness variable was in the low category compared to the variables perceived ease of use, actual system use, and behavioral intention to use. The perceived usefulness of a smartphone can be increased if the easier the smartphone is to use, the more valuable the smartphone is, according to the user. It can increase overall perception and lead to increased use. Smartphones are to be used, and the more valuable the smartphone is according to the user, the more it can increase overall perception and use.

Increasing The Effectiveness Of Growers' Performance

An indicator of improved effectiveness, demonstrated by the average score of 2.43, is categorized as a high measurement benchmark. This score indicates that the growers need to perceive smartphones as tools that enhance their performance, particularly in managing rejuvenation requirements. Growers continue to rely on direct visits to the KUD (Village Cooperative Unit) rather than utilizing digital tools. This finding contrasts Widodo & Ikhsanudin (2018) study, which demonstrated that website planters could quickly enter data, generate accurate and timely information, and efficiently print reports. The discrepancy between these findings suggests that, although smartphones have the potential to increase effectiveness, specific barriers prevent their full

utilization. Potential obstacles include a lack of digital literacy, inadequate availability of relevant applications, or poor internet connectivity.

Additionally, growers may only perceive digital tools as valuable if they trust the usefulness of the information provided. Despite smartphone ownership, growers tend to visit the KUD directly, possibly due to the proximity of their homes or a preference for obtaining information by interacting with other planters. For digital tools to be more widely adopted, these barriers must be addressed, and the perceived value of digital information must be demonstrated.

Smartphones Provide Information On How To Increase Productivity Through A Rejuvenation System

Indicators of increasing productivity with questions: The average score is 2. In the medium measurement standard category, planters believe that smartphones have specific applications that can improve the performance of planters, such as YouTube media, which provides information about palm oil. This follows research by Aditiawati et al. (2014), where someone knows about innovation and gains some understanding of how the innovation functions. The easier a smartphone is to use, the more valuable the smartphone is, according to users, which can improve overall perception and lead to increased use. Planters believe smartphones have specific applications that can improve planters' performance, such as YouTube media, which provides information about palm oil. If information is helpful, planters will not use it.

Smartphones Increase Knowledge About Rejuvenation

Indicator of increasing knowledge with questions, with an average score of 3.13 with medium measurement standard category; in this indicator, farmers can access the internet using smartphones to increase knowledge about agriculture; those who believe that the information is useful will use it but vice versa if they do not believe it. If the information is valid, then planters will not use it. This is in line with research by Aditiawati et al. (2014), where a person is involved in activities that lead to a choice to accept or reject innovation. . the concept of perceived usefulness is measured through indicators of improving performance, making work younger and overall the technology used invaluable. Smartphones have specific applications that can improve the performance of planters, such as YouTube media, which provides information about palm oil.

Figure 2.
Media Access
Source: Media Center Riau (2023)

Table 6. Recapitulation Of Smartphone Use Attitude Scores

No.	Description	Average Score	Category
1.	Smartphones make it easier to communicate with managers, planters, and other technical assistants	3.83	High
2.	Smartphones have special capabilities so they are easy to find information on activities related to palm oil, especially rejuvenation	2.90	Moderate
3.	Smartphones have an appeal so you don't get bored of using them	3.10	Moderate
	Total score	9.83	
	Average score	3.27	Moderate

Source: Data Processed (2023)

Usage attitude is conceptualized as a form of acceptance or rejection as an effect of technology use. Trust is essential in the development of new technology for its users. However, not all facilities provided by technology provide comfort.

The results of measuring attitudes towards using smartphones in rejuvenation activities in Keranji Guguh Village are overall included in the medium category with an average score of 3.27 that is smartphones make it easier to communicate with managers, planters, and other technical assistants, smartphones have special capabilities so they are easy to find information on activities related to palm oil, especially rejuvenation, smartphones are attractive so you do not get bored using them. This is based on research by Christian & Subejo (2018). General technology functions for planters are used to fulfill information, education, and entertainment needs.

Smartphones Make It Easier To Communicate With Managers, Planters, And Other Technical Assistants

The interaction comfort indicator, an average score of 3.83 with a high measurement standard category, means that oil palm planters in Keranji Guguh Village are helped by smartphone technology to make it easier to interact without needing to meet face to face by using applications that have been installed on smartphones such as SMS., telephone, and WhatsApp. The following research by Christian & Subejo (2018) uses various media such as telephone, SMS, and the Internet to support agricultural activities.

Farmers highly appreciate certain features already installed on smartphones, such as SMS, telephone, and WhatsApp. Smartphone media for oil palm planters in Keranji Guguh village is beneficial for getting information and education, and planters can also get entertainment when using it. Smartphones can support various needs both in academic and social terms, and this technology makes it easy for planters because of its wide range of communication capabilities. Everyone can connect to various social media platforms, chat with each other, comment, and discuss exciting topics.

Smartphones Have Special Capabilities, So They Are Easy To Find Information On Activities Related To Palm Oil, Especially Rejuvenation

The indicator of smartphone enjoyment, the average score is 2.9 with the medium measurement standard category, meaning that with this smartphone media, oil palm planters in Keranji Guguh Village can make friends, get information and education, and planters can also be entertained when using it. The following research by Christian & Subejo (2018) showed that the function of general technology for growers is to meet information, education, and entertainment needs. Farmers rely on experience passed down from generation to generation and rely on counseling from the local government to obtain information related to farming. This condition requires support using information technology so that agricultural business actors and extension workers can access information related to agriculture independently and accurately. The smartphone used meets needs such as payment, access control,

health, information on transportation facilities, and other needs. Today's people are very enthusiastic about using smartphones as a tool to communicate with other people.

Smartphones Are Attractive So You Do Not Get Bored Using Them

The indicator of not getting bored using a smartphone, the average score is 3.1 with the medium measurement standard category; via smartphone, planters in Keranji Guguh Village also do not get bored using it because it has various attractive features such as social media, YouTube, Facebook, and Instagram. Farmers can communicate comfortably using applications that can be downloaded on smartphones. The convenience you get is communication via personal chat with other farmers and administrators using the WhatsApp application. The results of research by Darmayanti et al. (2022) in Kuantan Singing Regency stated that the tendency of planters to use smartphones varies. Farmers use smartphones not only to support their farming business but also to access entertainment. It is just that planters remember the importance of using smartphones.

Figure 3.
Various features
Source: Farmers' Smartphone (2023)

Table 6. Recapitulation Of Smartphone Use Behavior Interest Scores

No.	Description	Average Score	Category
1.	Smartphones help find information related to rejuvenation	3.53	High
2.	The feeling of continuously wanting to use a smartphone to help with rejuvenation activities	2.93	Moderate
3.	The use of smartphones will continue in the future despite the renovation	3.93	High
	Total score	10.39	
	Average score	3.46	Moderate

Source: Data Processed (2023)

Behavioral interest is essential in the progress of advanced technology. Users' motivated attitude toward using the system can also increase their intention to use it continuously in the future to support their activities in the agricultural sector.

Smartphones Help Find Information Related To Rejuvenation

The high average score of 3.53 indicates that planters perceive smartphones as essential tools for accessing information related to rejuvenation, placing them in the high measurement standard category. This perception arises because smartphones provide all the necessary information conveniently. A key feature contributing to their indispensability is using applications like WhatsApp, which enables farmers to communicate, receive updates, and enhance their knowledge about implementing oil palm rejuvenation. This aligns with Juraman's (2014) findings that smartphones serve as efficient mediums for quick and easy access to information. Additionally, farmers in Keranji Guguh Village find smartphones appealing due to the variety of applications available, such as YouTube, Facebook, and Instagram, which serve as entertainment and valuable sources of practical information, keeping users engaged and preventing boredom. The convenience of personal chats via apps like WhatsApp further allows farmers to connect directly with peers and administrators, facilitating knowledge sharing and collaboration. Thus, smartphones are valued for communication and integrating access to information, learning opportunities, and social engagement, which are vital to farmers' work and daily lives.

The Feeling of Wanting to Use A Smartphone to Help with Rejuvenation Activities Continuously

The indicator of trying to use smartphones continuously is the average score of 2.93, a medium measurement standard category, meaning that oil palm planters will use smartphones in the future as long as it suits their needs. The needs of the planters are regarding oil palms (how to fertilize and control weeds correctly and adequately), and the instructors deliver the material using electronic media. Smartphone Use Will Continue In The Future Even Though It Has Been Rejuvenated. There needs to be support using information technology so that agricultural business actors and extension workers can access information related to agriculture independently and accurately. The ability to apply digital technology and adapt to innovative, creative, and innovative changes is needed.

Indicators that will continue in the future, the average score is 3.93 in the high measurement standard category, meaning that the behavioral interest in using smartphones has a good impression of its use. Planters feel helped by the features provided, which will continue in the future even though growers have carried out rejuvenation. Behavioral interest (MP) has an average score of 3.46 in the high category. Smartphones are a necessity for someone because all the information they need is readily available. The behavioral interest in using smartphones has a good impression on its use. Planters feel helped by the features provided, which will continue in the future even though growers have carried out rejuvenation, such as the use of social media and the consistent use of WhatsApp as a means of communication between planters. Using WhatsApp, planters can communicate, receive information, and increase knowledge regarding implementing palm oil rejuvenation.

Table 8. Recapitulation Of Scores For Real Conditions Of Smartphone Use

No.	Description	Average Score	Category
1.	Duration of smartphone use to search for rejuvenation information	1.10	Low Moderate
2.	Use of smartphones to search for information, Learn, and apply it in the implementation of rejuvenation	1.53	Low Moderate
	Total score	2.63	
	Average score	1.31	Low Moderate

Source: Data Processed (2023)

Actual conditions of use are defined as the response that a person measures with actual use. Measured based on repeated use and more frequent use, in this case, the use of smartphones in rejuvenation planters. The average score of 1.10 with a shallow measurement standard category explains that the acceptance of

smartphones by oil palm rejuvenation planters for oil palm planters is not good enough because of all the information obtained directly because of the distance between one planter's house and another nearby. Hence, the planters are not always looking for information related to its rejuvenation.

The average score of 1.53 is in the shallow measurement standard category, meaning plants use smartphones to support their farming business and for entertainment. It is just that planters do not forget about their interest in using smartphones.

Figure 4.
Information via WhatsApp
Source: Farmers' Smartphone (2023)

Duration of Smartphone Use to Search for Rejuvenation Information

Indicator of smartphone use frequency and duration, an average score of 1.1% with a shallow measurement standard category. This indicator explains that growers use smartphones to search for information about rejuvenation in daily life for less than 1 hour per day. This means that the reception of oil palm rejuvenation planters' smartphones among oil palm planters is not good enough because all information is obtained directly. The planters' houses are close to each other, so they do not always look for information related to rejuvenation. This is to research by Ginting (2015), the pattern of planters getting the information they need is by asking other planters, which is different from the research results of Darmayanti et al. (2022), the duration of use of smartphones for planters is 6-7 hours/day, which shows that it is increasing. Using a smartphone frequently/long will further increase the media literacy of planters.

Figure 5.
Duration Of Smartphone Use
Source: Farmers' Smartphone (2023)

Smartphones are used to search for information, learn, and apply it in the implementation of rejuvenation. Indicators of the actual use of technology in practice, the average score is 1.53% with a shallow measurement standard category, meaning that farmers use smartphones to support their farming business and access entertainment. It is just that planters do not remember the importance of using smartphones. Many studies have proven the importance of smartphones in facilitating farmers' access to information (Aker, 2011; Kumar, 2023; Landmann et al., 2021). An Egyptian study of 382 farmers found that mobile-based devices such as smartphones have significant benefits, including access to and sharing agricultural information (Kassem et al., 2020). In Pakistan, smartphone use for farmers varies based on education level and digital literacy (Khan et al., 2019). Even in Bangladesh, it is reported that the use of smartphones not only facilitates farmers' access to information and increases production. The OLS findings showed that the informative use of mobile phones significantly increases Boro rice production by 1.6–4.5%, indicating that farmers with better access to farming information achieve higher production than non-users (Ahmad et al., 2024).

CONCLUSION AND SUGGESTION

Conclusion

Based on the results of the discussion, conclusions can be drawn. Based on the analysis and discussion results, the following conclusions can be drawn: Using smartphones among planters in Keranji Guguh Village as a medium that helps find and receive information for planters is classified as moderate, with an average score of 2.84. The use of smartphones is one of the alternative media used by planters to search for information to support oil palm rejuvenation activities, both in searching for information on land clearing, determining planting spacing patterns, using superior seeds, plant maintenance, replanting, weeding, fertilizing and harvesting.

Suggestion

Academically, further research is needed regarding the communication strategies carried out in achieving the revitalization of oil palm plantations in Keranji Guguh Village, Koto Gasib District, Siak Regency, because plantation revitalization is related to many parties, such as banks, government agencies, large plantations as the core, plasma plantations as cooperatives, and community leaders, to find out feedback from planters, namely that planters understand the information provided by the communicator.

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