Use of Social Media in Agricultural Insurance activities in the tidal swamp area in Barito Kuala Regency

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Abstract. The development of communication technology impacts farmers, which will require them to have access to information about agricultural insurance. This research aims to describe the use of social media for farmers and analyze the level of social media use. This research was conducted using the observation method by selecting sample respondents using the Slovin formula. The level of social media use by respondents was measured based on the frequency and duration of social media: Facebook, YouTube, Instagram and WhatsApp. The highest use of social media is WhatsApp, while the time of use of Facebook, YouTube and Instagram is in the low category. The highest use of social media is to seek and obtain new information and testimonials from other people about agricultural insurance, the information most needed is the insurance claims process and costs reimbursed.

Keywords: Social Media, Farmers, Agricultural Insurance, Tidal Swamp

1 Introduction

In recent decades, information technology has drastically changed how we communicate, interact, and share information. One of the most revolutionary innovations in communication is the emergence of social media. Social media has become integral to everyday life, embracing individuals and communities into an instantly connected global network.

Social media has become a significant pillar in digital transformation in various sectors of life, including rice farming. This phenomenon not only creates a closely connected global network but also significantly positively impacts the development and utilization of technology in the agricultural sector [31],[13]. The use of social media in rice farming is not just a trend but a necessity that brings a paradigm shift in the pattern of communication, information sharing, and collaboration.

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The role of social media is not only limited to the personal level but also affects agriculture, business, politics, education, and social activism. Companies use social media as an effective marketing tool, politicians use it to gain mass support, and social movements use it to mobilize support and advocate for change, including agriculture. Social media has a significant role in increasing productivity and sustainability in the rice farming sector [15]. Paddy farmers can use social media platforms to share the latest information about farming techniques, pest management, threats of crop failure and so on [24], [1], [2].

Farmers often need help with crop failure and less-than-optimal agricultural production. One of the causes is the frequency of natural disasters that are very high and often referred to as disaster-prone areas, one of which is tidal swampland areas. Several natural disasters often occur, which include floods, droughts and so on. Business activities in the agricultural sector will always be faced with a relatively high risk of uncertainty. In addition, pest attack factors and plant diseases also affect agricultural production yields.

Agricultural insurance, or in this context, rice farming insurance, is a form of financial protection specifically designed to protect farmers and agricultural land owners from risks associated with rice farming activities [4], [3]. Agricultural insurance primarily aims to help farmers cope with financial losses caused by various factors, such as extreme weather, crop disease outbreaks, fires, and other risks that can affect agricultural yields [11], [12], [21].

Research related to the use of social media in the field of extension or agriculture has been carried out, among others, the use of social media to support agricultural extension activities [26], the use of internet media as a medium of information and communication in empowering farmers [28], the use of social media for agricultural extension workers in Tidal Swampland [2], the relationship of frequency of use of Whatsapp to the success of coffee marketing [20], agricultural information search behavior through online media in the Ginger farmer group [8], Utilization of Social Media in Agricultural and Fisheries Extension [22], the use of social media as a communication medium for agricultural extension workers in Agam District [5].

One of the problems is the increase in social media campaigns; questions arise about its effectiveness in increasing farmers' knowledge about the benefits, risks, and procedures of agricultural insurance. Meanwhile, the study also focuses on the challenge of communication and engagement of stakeholders, such as insurance companies and government agencies, through social media, investigating barriers that may arise in their efforts to interact with farmers. Questions about farmers' participation in online discussions (via social media) on the use of social media in agricultural insurance and the role of social media in tackling agricultural crises and disasters all give a deep dimension to the issue. This study aims to analyze the role of social media in agricultural insurance for tidal swampland farmers in Barito Kuala Regency and identify how social media contributes to disseminating information and awareness related to agricultural insurance among tidal swampland farmers.

2 Research Method

This study used a quantitative descriptive observation method, data collection was carried out from June to July 2022. The location determination was carried out by purposive sampling with the consideration that Barito Kuala Regency is one of the districts that is the center of rice farming in South Kalimantan, and Barito Kuala is dominated by tidal swampland agricultural areas [23]. The population of this study is farmers who have participated in agricultural insurance / rice farming insurance in 2019, sample determination using the Slovin

formula and obtained as many as 165 tidal swampland farmers in Barito Kuala. Data were collected through direct observation, questionnaires and interviews.

3 Result and Discussion

Agriculture in tidal swamplands is an agricultural system that adapts to the tidal cycle of sea water. This land undergoes periodic changes between being flooded at high tide and submerged in fresh water at low tide [27],[14]. Agriculture in tidal swamplands in South Kalimantan characterizes farmers' adaptation to tidal cycles. This land undergoes drastic changes between seawater flooded and freshwater submerged, affecting the types of crops that can be grown. Gogo rice and other coastal crops are the main choices [6], [19].

While these farms can provide good yields, challenges include flood risk, water salinity issues, and climate change impacts. With careful management, agriculture in tidal marshlands can be a valuable resource to meet local food needs while facing environmental complexities and challenges.

Table 1. Characteristics of tidal swamp land farmers

No	Indicator	Percent
1	Age	31-50 (76%)
2	Education	SD/Primary School (60%)
3	Farming experience	19-27 (38%)
4	Side job	Gardening (34%)
5	Ethnicity	Banjar (83%)
6	Income level (Annually)	Rp. 29 million – 46 million (56%)
7	Land	1-2 (64%)
8	Number of family members	3-4 (60,51%)
9	Crop Index (IP)	IP/Cropping index 1 (94.8%)

Source : processed by researchers

3.1 Utilization of social media in rice farming in tidal swampland.

The use of social media in rice agriculture has become a significant innovation to support the growth and development of this sector. Rice farmers can now access up-to-date information on the latest farming techniques, weather and market prices through platforms such as Facebook, Twitter and Instagram. Agricultural experts and research institutes can share their knowledge directly with farmers through live streaming, webinars, or online discussion groups. In addition, social media is also a forum to build a community of rice farmers who share experiences and solutions to the problems faced. Through photos and videos, farmers can easily visualize their farming process, facilitating communication and becoming a promotional tool to attract consumers' attention. The opportunity to interact directly with consumers on social media also opens the door to direct marketing of rice agricultural products, increasing sales opportunities and profits for farmers. Thus, using social media paves the way for increased productivity, sustainability, and economic sustainability in the rice farming sector.

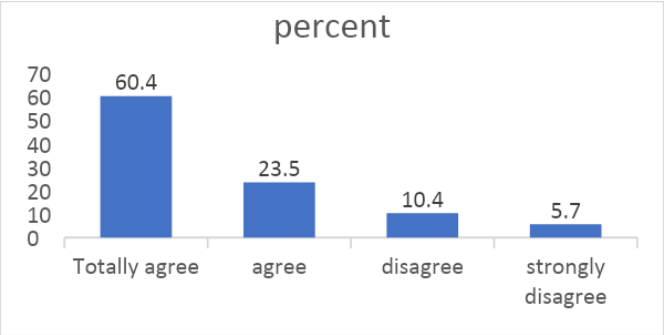

Fig 1. Social media for finding information and new agricultural technologies

Most farmers strongly agree that social media can be used to find agricultural information and new technologies at 60.4%. Social media has become an essential channel for finding and sharing information related to innovation and new technologies in agriculture; the role of social media in seeking further information and technology in agriculture is becoming increasingly crucial along with the development of technology and global connectivity. Social media provides quick and easy access to the latest news, research, and innovations related to agriculture.

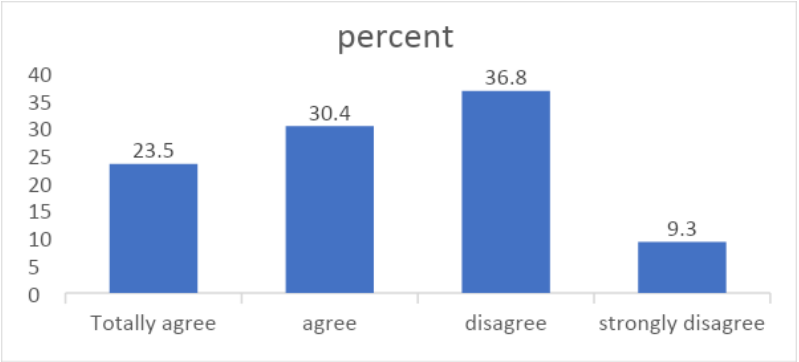

Fig 2. Social media as a means of learning agriculture

The data above shows that farmers in tidal swamps do not use social media as a learning medium with a percentage value of 36.8 percent. Farmers get learning about rice farming through counseling from PPL (agricultural instructor) from fellow farmers or through previous experiences. Farmers get rice farming learning through various sources of knowledge and approaches that have been available. One of the main ways is through training and workshops organized by agricultural institutions or local governments, farmers can attend these sessions to gain an in-depth understanding of best practices in rice cultivation, from tillage to harvest [7], [17].

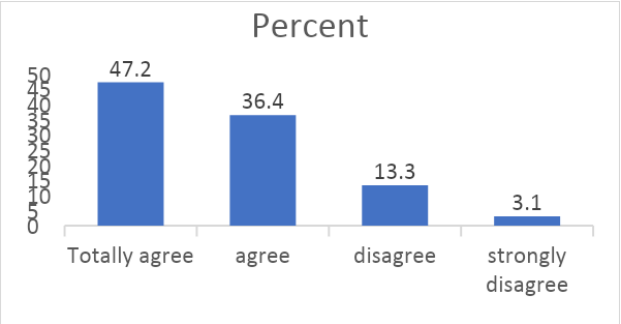

Fig 3. Social media as sharing experiences related to agriculture

The data above shows that farmers in tidal swamps share experiences with a percentage strongly agreeing with 47.2% and agreeing with 36.4%, through social media, farmers can exchange information about the latest farming techniques, crop management, and solving problems they may face in the field. Photos and videos are also often used to visualize agricultural processes, crop yields, or technological innovations. Discussions via WhatsApp can provide a space for exchanging ideas and solutions that can help increase agricultural productivity.

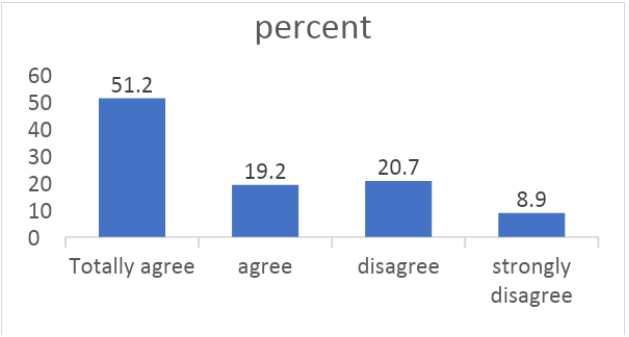

Fig 4. Utilization of Social media to see market prices

Tidal swamp land farmers use social media via WhatsApp to share information related to dry grain prices, rice prices, fertilizer prices and so on; the data above shows 51.2 per cent. Farmers and stakeholders in the agricultural industry can use platforms such as Facebook, Twitter, or WhatsApp to disseminate the latest information about the price of the dry grain they produce, the cost of rice sold, and changes in the price of fertilizer and other inputs. They can directly communicate with consumers, distributors, and other related parties through image uploads, descriptions and status updates. This helps increase market transparency and allows agricultural industry players to respond quickly to changes in prices and market conditions. Social media will enable farmers to join particular groups or communities focusing on farm products and find prices. Members can share experiences, current news, and pricing data from various sources in these groups. This provides direct insight into price fluctuations in local and national markets.

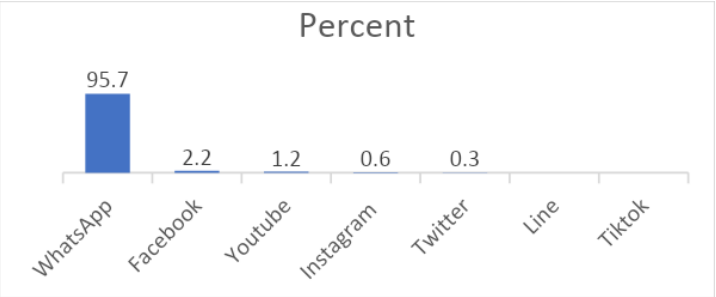

Figure 5. Media platform used in finding AUTP information

The data above shows that WhatsApp users are the highest; as many as 95.7 per cent of tidal swamp land farmers use WhatsApp as a medium to obtain agricultural insurance information. Research result Singh Nain) Media applications such as WhatsApp are beneficial for transformative change for farmers, with this application accelerating the innovation process for farmers and institutions [25]. This conversational social media technology can solve many obstacles related to information to the public or production processes in maintaining precise agricultural management, marketing sectors and so on [9].

In this study, forum media is limited as media access used by farmers in obtaining information through social media facilities. Social media is viewed based on platforms that are often used in finding information, consisting of WhatsApp (WA), Facebook (FB), YouTube, Instagram (IG), Twitter, Line, and TikTok. The platform that tidal swampland farmers often use to find information related to agricultural insurance is Whatsapp (WA) in Barito Kuala Regency. Most farmers use Whatsapp (WA) to find information about agricultural insurance, which shows farmers accessing information using WA every day. This is in line with the results of the study Humaidi that WA is the most visited social media. The high utilization of WA by tidal swampland farmers is due to many internal and external joining groups [10]. Based on the use of forum media through WhatsApp groups.

3.2 Utilization of Social Media and Types of AUTP information needed by farmers

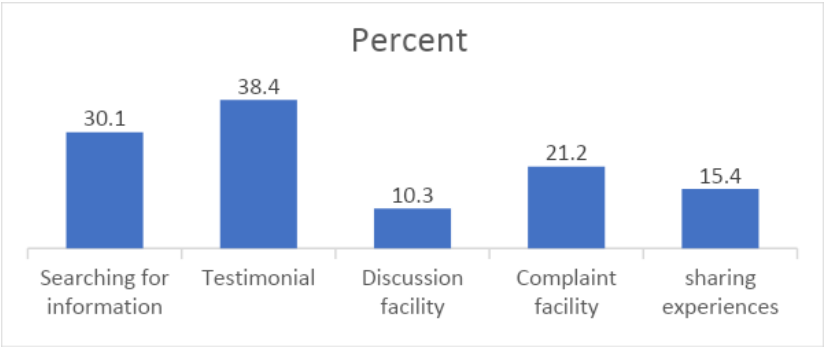

Fig 6. Utilization of Social Media on AUTP

The social media that farmers in agricultural insurance often use is a testimonial, which is 38.4 per cent. Using social media in agricultural insurance through testimonials is a smart strategy

to build trust and increase insurance participation. By inviting satisfied farmers to share their positive experiences through written or video reviews, the government can present concrete evidence of the advantages of agricultural insurance.

The second is to use social media to find agricultural insurance information (AUTP) 30.1 per cent of the limited knowledge and information of farmers about AUTP, starting from the benefits registration procedures to how to process claims, causes farmers to refrain from participating and misperceptions about AUTP. It states the importance of communication and information in this AUTP program.

The use of social media for farmers in the context of agricultural insurance brings significant benefits in terms of information, collaboration, and quick response to changes in agricultural conditions. Social media such as WhatsApp can be used to form groups on WhatsApp so that fellow farmer group members can stay connected and collaborate. Group discussions can involve exchanging ideas, problem-solving, and exchange of resources among members.

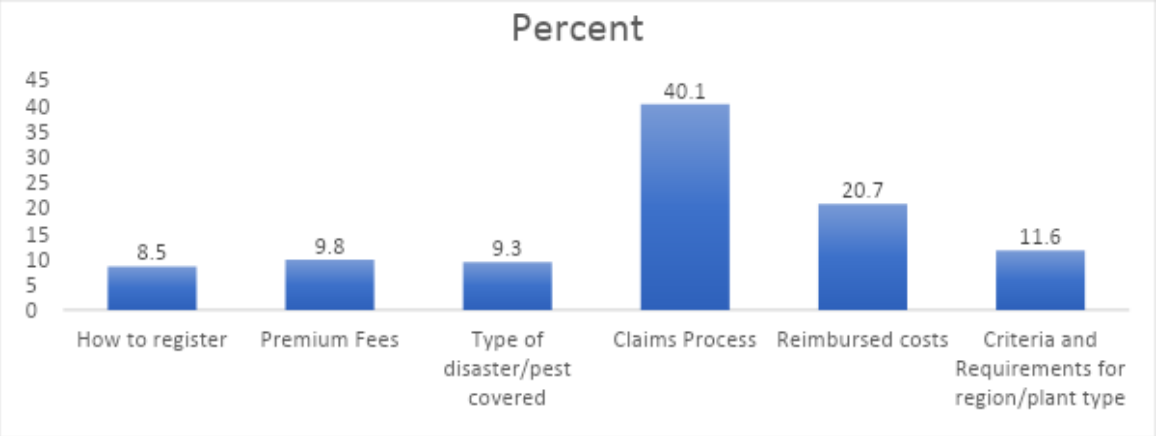

Figure 7. Types of AUTP information needed by farmers

Farmers need various information about agricultural insurance to make wise decisions in protecting their business. First, they must understand the risks that agricultural insurance can cover, such as crop damage from extreme weather, pest infestation, or crop disease. This information helps farmers identify specific risks their insurance policies need to cover. In addition, farmers need to know about insurance premiums, including how premiums are calculated and whether there are flexible payment options. Information about tips helps farmers in planning their budget. They should also understand the benefits they will receive if the risk occurs, including the amount of indemnity the insurance company will provide.

Furthermore, farmers need to know the requirements for insurance claims, in this case, getting the highest score of 40.1 per cent (figure 7). Including how much costs will be replaced by jasindo if farmers. This information is essential so that they can file claims correctly and promptly. Lastly, farmers also need to know about the insurance company they are considering, including the reputation and experience of that company in handling claims. This helps them choose a reliable insurance company. By having a comprehensive understanding of agricultural insurance, farmers can make the right decisions to protect their agricultural products from existing risks.

Agricultural insurance has a crucial role in supporting the sustainability of the agricultural sector and food security. Although challenges still exist, technological developments and new approaches continue to be applied to improve the efficiency and availability of agricultural insurance for farmers.

Farm insurance marketing campaigns delivered through social media can provide a better understanding of the benefits of insurance coverage to farmers who may need direct access to such information. In addition, social media creates a space for collaboration between farmers, where they can share experiences, tips, and best practices. Special groups or communities on social media can be places where farmers support each other and give advice, which can strengthen solidarity between them. Providing direct feedback or asking insurers via social media also allows farmers to respond faster to their claims or questions. Thus, using social media for farmers optimizes access to agricultural insurance information and builds empowered and supportive communities among critical actors in the farming sector.

The learning process through conversational application media such as WhatsApp makes it easier for farmers to learn, exchanging information between farmers and in extension activities [25], [9]. Research conducted by Munthali in the era of the digital world, conventional modes of interaction should not always be used, using digital platforms such as Telegram and WhatsApp to improve interaction patterns in innovation systems to achieve common goals, with these two platforms extension institutions can develop them [18]

Research by Trisnani on community leaders in East Java, West Nusa Tenggara and West Sulawesi has revealed that the use of WhatsApp (WA) as a means of communication to convey messages, notifications, or information has proven to be more effective [30]. They feel satisfaction because using information technology such as WhatsApp allows data to be received more quickly by the target party. Meanwhile, research carried out by Yoon in South Korea, regarding the adoption of Smart Farm innovation, which is future-oriented between the integration of agriculture and information technology, stated that the dominant factors that farmers will consider in adopting are technology compatibility, financial costs and changes in the digital environment influencing adoption [32].

4 Conclusion

The highest use of social media is WhatsApp, while the time of use of Facebook, YouTube and Instagram is in the low category. The highest use of social media is to search for and obtain new information and testimonials from other people regarding agricultural insurance. The information most needed is the insurance claim process and the reimbursement costs.

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