

Literature Review: A Study of YouTube Utilization for Livestock and Agricultural Businesses

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Abstract

Social media has become a technology-based communication channel, increasing the digital economy and bringing significant changes to various aspects of life, including the learning and development of livestock and agricultural businesses. Social media, especially YouTube, has been recognized as a reliable communication medium even when traditional media fails to convey messages. Although YouTube is recognized as a medium for learning, marketing, and community empowerment, research exploring its use to share technical knowledge and business practices in the livestock and agricultural sector still needs to be completed. This study seeks to fill this gap by exploring how livestock and agricultural business actors can utilize YouTube as a platform for education, skills development, and sharing specific experiences in this sector. This study uses the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) method to conduct a systematic literature review using YouTube in the livestock and agricultural sector. The data collection stages in this systematic literature review were carried out using the Scopus.com search engine. The literature review results show that YouTube has proven to be a significant tool for farmers and ranchers in accessing technical information, learning about new techniques, and improving product marketing.

Keywords: agriculture and animal husbandry, information technology, learning media, social media, YouTube

1. Introduction

Social media is a revolution in communication as a means of social learning. Understanding new knowledge is created by learning through interaction (Bandura, 1976). Social media has become a technology-based communication channel, growing widely in the digital economy and bringing significant changes in various aspects of life, including learning and business development (Wolff, 2021; Revathi et al., 2024). These technological developments create an environment where collective interpretation and sensemaking are key to addressing complexity, including the digital world (Sidharta et al., 2024). In education, social media is an important learning tool in the classroom (Abbas & Qassim, 2020). With the rapid development of technology today, social media has become one of the innovations in formal and informal digital communication platforms that can be used for various purposes, from communication and entertainment to education and business (Kumar & Nanda, 2022).

Social media makes it easier for users to communicate interactively, where individuals, communities, and organizations can share, discuss, create together, and modify content to be posted online (Punathambekar & Mohan, 2021). Social media, especially YouTube, has been recognized as a reliable communication medium even when traditional media fails to convey messages. YouTube is considered a long-distance interaction channel for building information exchange relationships and is easily accessible to anyone (Dehghani et al., 2016; Costa-Sánchez, 2017). YouTube is not only a platform for individuals to upload and comment on videos, but it can also be used to share business information practically and effectively.

The use of social and youtube interchangeably is not appropriate. Stick to Youtube after introducing it in the introduction as an effective platform for learning media. (Kohle & Cuevas, 2010; Kietzmann et al., 2011; Thakur &

Chander, 2018). Through video tutorials, YouTube is a tool often used by teachers in the online learning process to provide learning materials (Bardakci, 2019; Maziriri et al., 2020; Dughera et al., 2020; Rahmatika et al., 2021; Anastasia et al., 2022). Meanwhile, to support entrepreneurship development, YouTube is considered one of the effective platforms to promote products and reach customers more widely (Sajid, 2016; Schwemmer & Ziewiecki, 2018). Social media is also a platform that has the potential to be used by entrepreneurs to develop their businesses, including agriculture-based businesses (Morris & James, 2017; Thakur & Chander, 2018; Zipper, 2018; Schrager, 2020; Riley & Robertson, 2021).

Although there has been much research on the use of social media and YouTube, there has yet to be much comprehensive research on the use of YouTube to share livestock business information. The focus of previous research on YouTube includes its use as a formal and informal learning medium, a marketing tool, a platform for skills development, and a means of community empowerment.

Table 1. The focus of previous research

Research focus	Author
Learning media	(Kohle & Cuevas, 2010; Kietzmann et al., 2011; Thakur & Chander, 2018)
Sharing tutorials	(Bardakci, 2019; Maziriri et al., 2020; Dughera et al., 2020; Rahmatika et al., 2021; Anastasya et al., 2022)
Promoting products	(Sajid, 2016) (Schwemmer & Ziewiecki, 2018)
Developing entrepreneurship	(Morris & James, 2017; Thakur & Chander, 2018; Zipper, 2018; Schrager, 2020; Riley & Robertson, 2021).

Source: Primary data

Based on table 1, many previous studies have explored YouTube as a supporting tool in classroom learning. any previous studies have explored YouTube as a supporting tool in classroom learning. For example, Bardakci (2019) and Dughera et al. (2020) show how YouTube serves as a medium to provide additional learning materials, such as video tutorials, that help students understand concepts visually and interactively. These studies highlight the advantages of YouTube in enhancing students' learning experiences in various fields of study. Several studies focus on the effectiveness of YouTube as a marketing platform for various types of businesses. Sajid (2016) and Schwemmer and Ziewiecki (2018) examine how YouTube can promote products, increase brand awareness, and reach a wider audience. These studies highlight the role of YouTube in building direct interactions between brands and consumers through video content, such as product reviews, usage tutorials, and customer testimonials.

Other studies have discussed YouTube as an informal learning resource where users can access videos to learn various practical skills or expertise. For example, Thakur and Chander (2018) show how YouTube has become famous for people who want to learn new skills outside formal educational settings, such as farming techniques or crafts. YouTube videos make it easy to access practical knowledge that users can follow independently. YouTube has also been studied as an effective tool in developing entrepreneurship, especially for small and medium enterprises (SMEs), to reach consumers more widely in the digital economy era (Morris & James, 2017; Zipper, 2018). Wich study shows that YouTube helps entrepreneurs promote products, share brand stories, and educate customers about the benefits or how to use their products to compete in the digital market. YouTube is a platform for individuals or groups to share knowledge, experiences, and relevant social issues with their audience (Kietzmann et al., 2011). In this context, YouTube is considered a tool for sharing information that supports public education, especially regarding health, environment, and social welfare.

Previous research has yet to discuss the use of YouTube, specifically in the context of YouTube's use in the livestock and agriculture sector. Although YouTube is recognized as a medium for learning, marketing, and community empowerment, research exploring its use to share technical knowledge and business practices in the livestock and agriculture sector still needs to be completed. This context involves using YouTube to disseminate information on livestock techniques, livestock business management, livestock product marketing, and overcoming challenges in the livestock industry.

This research seeks to fill this gap by exploring how livestock and agricultural business actors can leverage YouTube as a platform for education, skills development, and sharing of sector-specific experiences, thereby providing practical benefits to livestock farmers and aspiring entrepreneurs in improving the effectiveness of their livestock businesses.

2. Research Method

This study uses the Preferred Reporting Items for Systematic Review and Meta-analyses method, commonly known as PRISMA (Moher et al., 2009). This systematic review method aims to conduct a systematic literature review on using

YouTube in animal husbandry and agriculture. Furthermore, all literature sources that have been successfully identified will be read and analyzed in depth to understand how the process of interpreting and understanding data in the context of using YouTube in animal husbandry and agriculture.

2.1 Data Collection

The data collection stages in this systematic literature review involve several essential steps to ensure a thorough search process. First, selecting relevant databases uses the right combination of keywords. This process includes determining relevant keywords and applying inclusion and exclusion criteria to filter papers that match the research objectives. In addition, a complete list of relevant papers is compiled based on the keywords set. Data extraction is done using the Scopus.com search engine to obtain accurate and relevant data. With this method, the search process can be carried out systematically and structured so that the data collected can represent all available literature on the studied topic entirely and accurately. Articles that match the keywords are then identified to ensure that the literature obtained is relevant to the focus of the study. After that, data from the literature found is extracted and analyzed systematically to understand how YouTube is utilized in animal husbandry and agriculture.

2.2 Synthesis

The data synthesis stage is used to explore the use of YouTube as a platform for sharing information, marketing, and learning in the field of animal husbandry and farming, consisting of four main steps:

1. Searching for articles through Scopus.com using the keywords "YouTube AND farm OR business OR learning OR information OR sharing." These keywords are used to find studies relevant to the research topic, especially those discussing the use of YouTube in animal husbandry and agriculture.
2. Article screening is carried out based on the field of science with a focus on the field of social sciences, the type of document, and the suitability of keywords to ensure that only literature relevant to the research topic is considered.
3. Screening based on abstracts includes a discussion of the use of YouTube in animal husbandry and agriculture.
4. The final step is the analysis of the filtered literature data. Data from the selected literature is combined and analyzed to identify patterns, themes, and significant findings related to using YouTube in animal husbandry and agriculture. The results of this process are then reported in the form of a literature synthesis to provide a clear and comprehensive picture.

2.3 Article Search Stages

The article search stages in this study were carried out with a structured and systematic approach using the Scopus.com academic database. This platform provides access to various high-quality scientific literature. This process begins with designing a search strategy, where the first step is selecting specific and relevant keywords. The selection of keywords is carried out by considering the scope and focus of the research to ensure that the articles found are genuinely relevant to the topic being raised.

In this study, the keywords combined "YouTube AND farm OR business OR learning OR information OR sharing." This combination was chosen carefully to reflect the research focus: using YouTube as a learning medium in animal husbandry. These keywords cover various aspects of primary concern in learning, such as animal husbandry, the learning process, the dissemination of information, and the practice of sharing knowledge through digital platforms such as YouTube.

The logical operators "AND" and "OR" are used strategically to expand and focus the search results. The "AND" operator ensures that the articles found include more than a critical term in this study. In contrast, the "OR" operator adds to the beginning of the search by including articles that use one of the relevant terms. This combination of operators is intended to produce comprehensive and specific search results covering various topics related to the research theme.

From the search results conducted using a combination of keywords, 2,554 articles were obtained that were relevant to the focus of this study. This number reflects the high interest of researchers in the issue of utilizing YouTube as a digital medium in the fields of animal husbandry and agriculture. This shows that this topic is not only an interesting discussion among practitioners but has also become a research area that has received significant attention from the global academic community.

The articles found not only show diversity in terms of the methodological approaches used but also represent a variety of perspectives that cover various important aspects, such as the application of technology in increasing the efficiency

of livestock businesses, the application of digital-based learning for farmer education, and the role of digital platforms in expanding access to information and sharing knowledge globally. The diversity of these approaches indicates a complex dynamic in scientific studies, where digital technology, such as YouTube, is increasingly positioned as a strategic tool to support innovation and sustainability in the agribusiness sector.

Furthermore, this finding provides validation that the issues raised in this study have a solid academic basis. The relevance of this topic is evident from the large number of scientific literature that discusses it, emphasizing that the use of digital technology in the agribusiness sector has become an essential discourse in various disciplines. Thus, the results of this research not only strengthen the position of the study conducted but also open up a more expansive discussion space on how digital technology can continue to be utilized to drive the sustainable development of the agribusiness sector.

From the total search results through Scopus.com, 2,554 articles were obtained with additional searches through Google Scholar 10 articles, so the total articles obtained were 2,564. The next step is the filtering process to ensure that only the most relevant articles to the research will be analyzed further. The first stage in the filtering process is the selection of articles based on scientific disciplines, namely through filtering by business and management. This step was taken because YouTube as a learning medium for livestock is often discussed in business and management, which includes studies on individual and organizational behavior, psychology, communication, and social dynamics that influence the use of YouTube as a learning medium for livestock.

The next stage in the research process was screening based on document type, which was carried out carefully to ensure that only articles relevant to the field research were included. This step is essential because the type of document selected, namely field research, has the advantage of providing more factual, detailed, and in-depth data. Articles with this focus are expected to clearly understand how farmers and other agribusiness actors use YouTube as a learning medium.

Several criteria were set for this screening process. These criteria include the use of field methodology in data collection, the existence of documentation on the application of YouTube in the livestock context, and an analysis of the digital platform's influence on improving farmers' skills, efficiency, or productivity. With this strict selection approach, the number of articles that initially reached 2,554 search results from Scopus.com was successfully filtered down to 109 more specific and relevant articles.

The selected articles include various studies offering empirical data and analysis. Among them are studies documenting how YouTube video tutorials help farmers understand modern farming techniques, how online communities on the platform encourage collaboration and knowledge sharing, and how the content helps promote sustainable farming practices. Covering a variety of contexts, from small-scale businesses to industrial farms, these articles provide rich insights into the realities on the ground.

This screening process aims to narrow the scope and ensures that the literature review analysis is firmly grounded in empirical experience. With data taken directly from the field, this study can provide a realistic picture of the use of YouTube in supporting livestock learning activities. The results of this screening also help build the reliability of the survey by presenting relevant evidence-based facts so that the findings can be used as a reference for policies or strategies for developing digital technology in agribusiness.

The next step is to conduct abstract screening after the article filtering process is carried out based on scientific discipline and document type. This abstract screening process aims to review the abstract of each remaining article to ensure that the research topic, research results, or implications contain keywords relevant to the study's focus. At this stage, the researcher carefully checks whether the article discusses the main issues to be analyzed. From the results of abstract screening, 79 articles were removed from the list because it was considered that the research results or topics discussed did not match the criteria of this study. After this screening, only ten articles remained that substantially met the research criteria and were considered to have strong relevance to be used as material in the literature review.

3. Results

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) diagram is used in this study to describe the flow or stages of systematically searching and selecting articles. This diagram helps explain how articles or studies are selected and filtered to ensure that only the most relevant sources are used in the study. The PRISMA flow diagram shown in Figure 3 illustrates the process of systematically searching and selecting articles in this study through several detailed stages as follows:

1. Initial identification: The search began using the Scopus.com database, where 2,554 articles were found based on the keywords "youtube AND farm OR business OR learning OR information OR sharing". This search was conducted to ensure that all studies were relevant to YouTube utilization in animal husbandry and agriculture.

2. Deletion of duplicate articles: After deleting duplicate articles, the number of remaining articles was 109 articles. This duplication removal aims only to use the same article that may appear once in the initial search.
3. Initial screening: The initial screening stage was carried out based on the social sciences category and the type of field research document. At this stage, 2,445 articles were deemed irrelevant to the study criteria and were removed from the selection process. These articles were filtered based on incompatibility with the research focus, such as using different methods or less relevant topics.
4. Screening based on abstracts: At this stage, from 109 articles, further screening was carried out by reviewing the abstracts of the remaining articles. A total of 2,445 articles were excluded with the following details: 1,424 articles were excluded because the setting or target group did not meet the requirements, 645 articles used an irrelevant observational study design, 223 articles did not have an appropriate intervention component, and 74 articles were excluded because the topic was not relevant to the research focus.
5. Full-text eligibility assessment: Of the remaining 109 articles, 79 articles were further analyzed to assess whether the topic, research results, or research implications were relevant to the focus of the study on the use of YouTube in animal husbandry and agriculture. A total of 79 articles were excluded with the following details: 23 articles did not meet the research results requirements, 20 articles were excluded because the intervention components were not appropriate (e.g., organizational policies), 15 articles used extensive data analysis that was not relevant to the criteria of this study, and 11 other articles were excluded because the primary data collected did not meet the requirements.
6. Final results: After all screening stages, ten articles were selected as material in the literature review. These articles were considered relevant to the research topic of using YouTube in animal husbandry and agriculture.

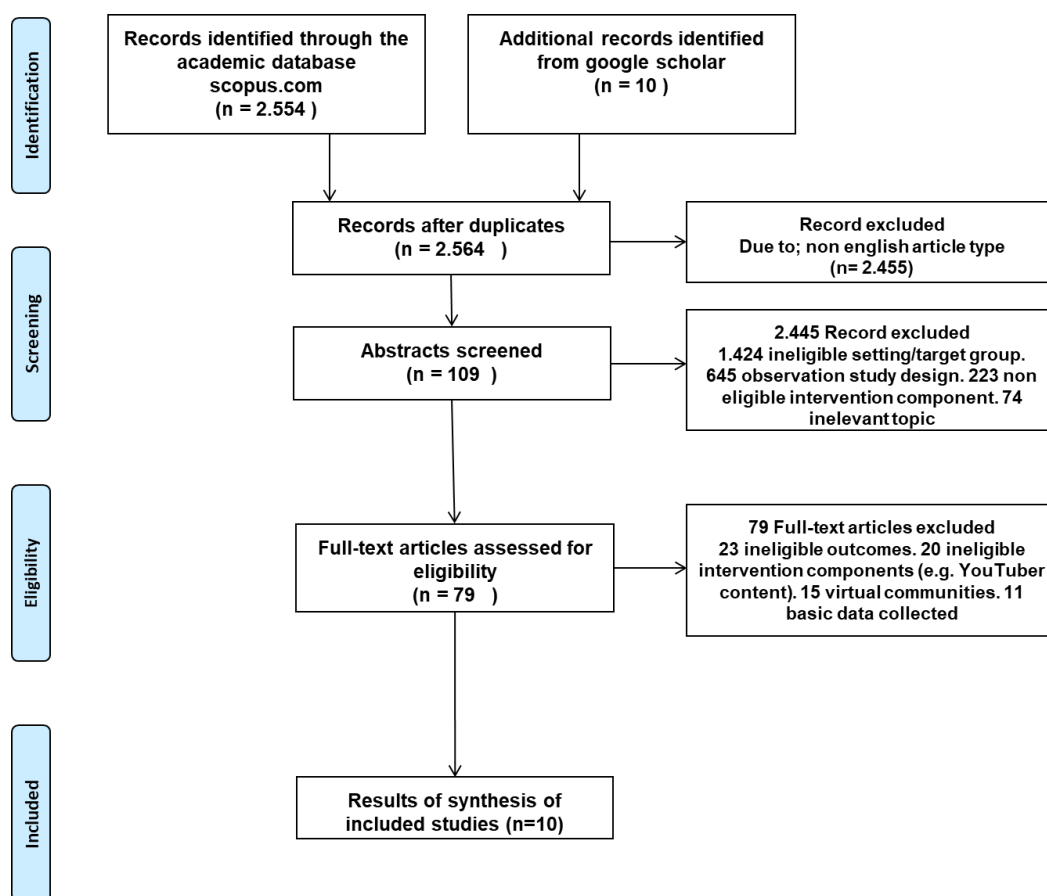


Figure 3. Flowchart diagram of article search and determination

Overall, the PRISMA diagram presented serves as a tool that provides high transparency in the article selection process for this study. By using a systematic and structured method, this diagram ensures that every step of the article search and screening is well documented, thus minimizing the potential for bias in source selection. The PRISMA diagram also ensures that the research is based on valid, reliable, and relevant sources to the topic of study by filtering out articles

that do not meet the research criteria. Thus, using this diagram increases the credibility and reliability of the research and makes it easier for other researchers to replicate or understand the literature selection process that has been carried out, making the entire process more accountable and responsible.

Table 2. Results of synthesis of included studies

Author/Year/Title	Research result
Daum et al (2022) Connected cows and cyber chickens? Stocktaking and case studies of digital livestock tools in Kenya and India.	Case studies in Kenya and India show that YouTube provides farmers easy access to modern farming techniques that may be difficult to obtain through traditional channels.
Jang et al. (2023). Visual Attributes of Thumbnails in Predicting YouTube Brand Channel Views in the Marketing Digitalization Era.	YouTube's marketing use is heavily influenced by visual elements, mainly video thumbnails, which capture audience attention and increase views on a brand's YouTube channel.
Mears (2023) Bringing Bourdieu to a Content Farm: Social Media Production Fields and the Cultural Economy of Attention.	YouTube, in the context of agriculture and social media content production, plays a role in the attention economy, where agricultural content creators, through social and cultural capital, explain how farmers and agricultural businesses can increase exposure and appeal to their agricultural content, such as farming techniques and farm management practices.
Uy et al. (2024). Social Media Adoption for Agricultural Development: Insights From Smallholders in Central Vietnam.	YouTube and other social media play a significant role in providing practical and technical information on increasing yields, managing pests, and using more efficient farming technologies for smallholder farmers in Vietnam.
Pounds et al. (2014). Social Marketing Campaign Promoting the Use of Respiratory Protection Devices Among Farmers.	YouTube can be used as a social marketing campaign to convey health and safety messages to farmers, particularly in promoting respiratory protection.
Roche et al (2020). Communication Preferences and Social Media Engagement Among Canadian Dairy Producers.	Dairy farmers are using YouTube and other social media in Canada to support business development and serve as an effective platform for farmers to learn and share best practices in farm management, from cow care to milk production efficiency.
Kanchewa et al. (2021). Exploring Differences in Communication Behaviors Between Organic and Conventional Farmers.	For organic farmers, YouTube is a source of information on environmentally friendly farming methods, waste management, and animal health practices that comply with organic standards. Meanwhile, conventional farmers use the platform to understand new technologies, operational efficiencies, and how to increase productivity.
Palaniswamy & Raj (2022). Social Media Marketing Adoption By Agriculturists: A Tam Based Study.	YouTube is a very effective platform for farmers to market products, share information, build brands with digital marketing trends, and expand business networks in the agricultural industry.
Grohmann et al. (2022). Click Farm Platforms is an Update on informal work in Brazil and Colombia.	YouTube for agricultural businesses is a marketing tool for workers in the informal sector and "click farm" platforms to earn additional income through content monetization.
Ryu (2013). Development of Urban Farm Management System using Commercial SNS as IoT Platform.	Urban farm management systems that use commercial social media platforms, including YouTube, as part of the Internet of Things (IoT) system serve as more than just a marketing tool or channel for sharing information and connecting urban farms with advanced technologies that enable more efficient and data-driven farm management.

Source: Database Scopus.com

4. Discussion

The previous literature review provides essential insights into the strategic role of YouTube in supporting the livestock and agricultural sector, particularly in information dissemination, training, and marketing. The platform has become essential in providing access to new knowledge and skills previously challenging to achieve through traditional approaches. Daum et al. (2022) and Uy et al. (2024) emphasize the importance of YouTube in disseminating agricultural information to different countries. However, these studies also show a lack of focus on how localized content designed with cultural sensitivity can influence farmers' acceptance and adoption of new techniques. Content that has cultural relevance and local context has the potential to be more effective in engaging local farmers. Unfortunately, research on

the influence of culture-specific content on the adoption of innovations in agricultural practices is still limited and requires further exploration.

Furthermore, while Roche et al. (2020) and Kanchewa et al. (2021) highlight the role of YouTube in sharing best practices, the aspects of community building and social support through this platform have yet to be widely discussed. YouTube has the potential to be an interactive space that allows farmers to share experiences and knowledge and even find standard solutions to the challenges they face. The platform's ability to facilitate active and collaborative discussions between farmers, especially in a local or regional context, can strengthen social networks and increase the efficiency of shared learning.

On the other hand, Ryu (2013) underlines the relevance of YouTube in supporting Internet of Things (IoT) systems for urban agriculture. Still, its application in rural contexts with limited technological infrastructure has yet to be widely discussed. Integrating YouTube content and IoT technology in rural environments can be an innovative solution to address challenges in remote areas, such as better resource management or increased operational efficiency. This opens up opportunities for further research examining the adaptation of this technology to support community-based agriculture in digitally underserved areas.

Furthermore, although Jang et al. (2023) and Palaniswamy and Raj (2022) discuss the benefits of marketing and branding through YouTube, an in-depth analysis of the effectiveness of digital marketing in increasing sales of agribusiness products still needs to be provided. Research exploring content presentation strategies, such as audience segmentation, use of visual storytelling, and their impact on sales conversion of agricultural products, is essential, especially for smallholder farmers operating in local markets. Such studies can reveal ways to maximize the potential of digital marketing in supporting small businesses in the agricultural sector.

Grohmann et al. (2022) mentioned the potential of content monetization on YouTube as a source of additional income. However, research on how farmers and ranchers can actively utilize this feature still needs to be completed. The impact of monetization on farmers' motivation to share knowledge, create educational content, or expand their audience reach also requires further study. In this section, a more detailed exploration can help understand how monetization not only supports additional income for farmers but encourages them to actively participate in developing the digital ecosystem of agribusiness.

Finally, the study by Jang et al. (2023), which highlights visual elements as the main attraction in digital marketing, is a good start. However, in-depth research on the impact of elements such as thumbnail design, video title selection, color use, and other visual compositions in the agricultural context still needs to be made available. Such research can provide valuable insights for farmers and agribusiness actors to optimize their digital marketing strategies through YouTube. By filling the existing research gap, this in-depth literature review can help provide a more comprehensive perspective on how YouTube can be optimized as a tool to support innovation and growth in the agriculture and livestock sectors.

5. Conclusion

YouTube has become one of the digital platforms that has proven to have a significant role for farmers and livestock breeders in various aspects. Through this platform, they can easily access technical information, learn new techniques, and increase the effectiveness of marketing their agribusiness products. Studies by Daum et al. (2022) and Uy et al. (2024) stated that YouTube provides better accessibility to practical information and agricultural technology, especially for farmers in remote areas who are often difficult to obtain through conventional methods such as direct training or field consultations. With this platform, geographical barriers that were previously barriers can be minimized, providing broader opportunities for developing agricultural knowledge and skills. Not only in terms of accessibility, the role of visual elements on YouTube is also crucial in attracting the audience's attention. Jang et al. (2023) revealed that features such as thumbnails have great power in attracting audiences from the agricultural sector. This visual element makes videos more attractive and effective in conveying messages or information to viewers, both in terms of production techniques and aesthetics relevant to the agricultural and livestock sectors. In a specific context, Kanchewa et al. (2021) showed that YouTube also contributes significantly to encouraging adopting environmentally friendly organic farming practices, such as guides on using natural ingredients for livestock maintenance or sustainable farming methods. Video tutorials with a simple yet comprehensive approach have been shown to help farmers adopt these more environmentally friendly methods.

However, most studies still focus on using YouTube globally without considering local aspects, such as cultural and language contexts, that greatly influence farmers' understanding and acceptance of the content presented. Adapting content relevant to local cultures is critical to ensure that implementing new agricultural technologies and techniques is more effective. For example, presenting information in local languages or using metaphors in farmers' daily lives can increase emotional connectivity with viewers. Existing studies, such as those conducted by Roche et al. (2020), discuss the benefits of YouTube in sharing best practices among farmers. However, these studies still need to be more extensive

in exploring the potential of YouTube for forming collaborative communities among farmers, who not only share information but also provide emotional support and practical solutions based on experience. YouTube's potential to integrate with modern agricultural technologies, such as the Internet of Things (IoT), has also not been explored in depth, especially in rural areas with limited access to these advanced technologies (Ryu, 2013).

Furthermore, although Jang et al. (2023) have highlighted the importance of visual elements, to date, there has been no comprehensive analysis of how these elements can be optimized for specific agricultural audiences, such as the use of animations or interactive graphics to facilitate farmers' understanding of complex techniques. In addition, research by Grohmann et al. (2022) states that content monetization on YouTube has the potential to be a source of additional income for farmers and content creators in the agricultural sector. Unfortunately, they have not explored further the impact of these income incentives on farmer engagement in creating educational and engaging content in the long term. With the various opportunities and challenges faced, YouTube has great potential to become more than just a video-sharing platform. This platform can develop an ecosystem into continuous learning for farmers and ranchers, both locally and globally, warranting a deeper strategic approach in utilizing features and customizing content for various audiences.

6. Limitations of the Study

This literature review research has limitations in the study of the use of YouTube for livestock and agricultural businesses, including the need for more exploration of local or cultural contexts and lack of depth in the differences in specific needs in each region. In addition, issues related to digital skills and technological literacy for remote farmers have yet to be explored.

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Authors contributions

Wenny Maya Arlena was responsible for the design and revision of the study. Prof. Dr. Ir Pudji Muljono, M.Si, collected literature data. Dr. Ir. Sarwititi Sarwoprasodjo, M.S, was responsible for compiling the literature review manuscript, and Dr. Tin Herawati, SP, M.Si, assisted in revising and editing the language. All authors read and approved the final manuscript.

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Data sharing statement

No additional data are available.

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