

SOCIAL MEDIA FOR PROMOTION AND MARKETING IN FAMILY FARMING: a resource application perspective

MÍDIAS SOCIAIS PARA PROMOÇÃO E COMERCIALIZAÇÃO NA AGRICULTURA FAMILIAR: uma perspectiva da aplicação do recurso

MEDIÓS SOCIALES PARA LA PROMOCIÓN Y COMERCIALIZACIÓN EN LA AGRICULTURA FAMILIAR: una perspectiva de aplicación de recursos

Andrea Rossi Scalco

Post-Doctorate in Applied Social Sciences at Santa Clara University (USA). Doctorate in Production Engineering (PPGEP/UFSCAR/São Carlos). Masters in production engineering (PPGEP/UFSCAR/São Carlos). Undergraduate in Food Engineering (Ibilce/UNESP/São Paulo). Researcher at CEPEAGRO (Agribusiness and Development Research Group), Associate professor at São Paulo State University "Julio de Mesquita Filho" (UNESP). Associate professor at ISBE (Swedish-Brazilian Institute of Circular Economy), member of All4Food. andrea.scalco@unesp.br.



0000-0001-8039-9450

Amanda Fracari de Souza

Master's student in Agribusiness and Development at the São Paulo State University (Unesp), Faculty of Science and Engineering, Campus Tupã, Brazil. Specialist in Digital Business and Innovation. afracari98@qmail.com.



0000-0003-0495-2335

Cristiane Hengler Côrrea Bernardo

Postdoctoral fellow at Dartmouth College, DARTMOUTH, United States. Doctor in Education. Research advisor for the Graduate Program in Agribusiness and Development at the São Paulo State University (Unesp), School of Science and Engineering, Campus Tupã, Brazil. cristiane.bernardo@unesp.br.



0000-0002-9957-7437

Roberto Bernardo

Doctor in Production Engineering. Research advisor for the Graduate Program in Agribusiness and Development at the São Paulo State University (Unesp), School of Science and Engineering, Campus Tupã, Brazil. roberto.bernardo@unesp.br.



0000-0002-3140-9138

Eduardo Guilherme Satolo

Postdoctoral fellow at the Fluminense Federal University, UFF, Brazil. Doctor in Production Engineering. Research advisor for the Graduate Program in Agribusiness and Development at the São Paulo State University (Unesp), School of Science and Engineering, Campus Tupã, Brazil. eduardo.satolo@unesp.br.



0000-0002-8176-2423

Mailing address: Universidade Estadual Paulista Júlio de Mesquita Filho, Campus de Tupã. Rua Domingos da Costa Lopes, 780 – Jardim Itaipu, Tupã – SP, CEP: 17602-496, Brazil.

Received: 02.26.2023. Accepted: 05.01.2023. Published: 05.26.2023.

ABSTRACT:

Family farming provides food diversity worldwide. If, on the one hand, there is its productive efficiency, within the scope of the management of diverse cultures, on the other hand, there is the challenge in the promotion and commercialization of family farming products. This article seeks to, through a Systematic Literature Review (SLR) and the use of the StArt tool, analyze the research published in the databases Scopus and Web of Science, so as to verify the use of social media for promotion and commercialization in family farming. The results indicate that the use of social media in family farming is beneficial, bringing positive results, however, it lacks incentives, investments, and attention from public policies.

KEYWORDS: Family farming; Digital marketing platforms; Digital promotion platforms; Systematic Review of Literature; Social media.

1. Introduction

Family farming is responsible for producing about 80% of food in the world (FAO, 2019). However, one of the challenges of this sector is related to digital connectivity for the promotion and commercialization of these foods. The use of digital means to promote and commercialize products from small farmers is relevant for market



movement, as well as for the ease of processes and breadth of information dissemination.

Gazolla and De Aquino (2021) state that family farmers have a great ability to reinvent themselves in the face of adversity. This can be seen with the advent of the Covid-19 pandemic, in which some limitations of social contacts were established for greater safety and health of the population, leading to greater participation of family farmers in the virtual space. Thus, the use of websites and digital platforms was better developed as a way to continue promoting and marketing products from small farmers.

When researching the use of virtual space environments by family farmers in scientific articles, the terms commonly used by researchers are 'social media' and 'digital platforms', as presented throughout this article. In the case of social media, the term disseminated in 2005, according to Kaplan and Haenlein (2010), and is generally used to describe the various forms of media content that are publicly available and created by users, being modified by users in a participatory and collaborative way. Some examples are blogs, Wikipedia, YouTube, Facebook, virtual games, among others.

However, in some cases the authors Kaplan and Haenlein refer to the previously cited examples with the term 'platform', in addition to 'social media', terms also used by the authors Kietzmann et al. (2011), in conjunction with referring to social media as 'social media platform' or 'social media sites'. For the authors Kietzmann et al. (2011), social media are web-based technologies that allow communities and individuals to share, create, discuss, and modify generated content. Examples of social media are Facebook, Twitter, LinkedIn, YouTube, among others.

In this case, digital platforms are like a set of digital resources, including services and content, that allow and emphasize the interaction between groups of users, such as producers and consumers (Bonina et al., 2021; Constantinides et al., 2018). For Mishra and Tripathi (2020), digital platform is the action focused on the web, such as Facebook, Twitter, blogs, websites, and SMS. For Cusumano et al. (2021), social media and online commerce meet these requirements, pointing – as examples – to YouTube, Twitter, WhatsApp, and Facebook.

Therefore, due to the similarity of examples and concepts in the two cases of social media and digital platforms, as well as the fact that there is the possibility of analyzing works through the coupling of both terms, in this Systematic Literature Review (SLR), both terms are used in the search. This way, the possibility of excluding works that address the theme of this review does not occur, respecting the choice of terms used by each researcher. However, in this article, to address the issue, the standardization of terms was chosen, using only the term 'social media' throughout the text.



That said, despite attributing the importance that social media can offer to family farming, especially those that enable the promotion and commercialization of products, there is much to investigate on this topic in scientific publications. Thus, investigating existing approaches and results on the subject is essential for the construction of knowledge and indication of gaps for future research.

In this context, the present article aims to identify and analyze, through SLR, research that addresses social media of promotion and commercialization that are used in family farming.

This research is justified because, as confirmed by Zuñiga et al. (2020), digital promotion and marketing platforms improve the performance of family farmers in the virtual environment, providing possibilities for marketing products as well as their better dissemination. In this way, identifying what has already been advanced in the subject and what gaps exist becomes an efficient instrument for advancing knowledge about the use of social media in agriculture.

2. Methodology

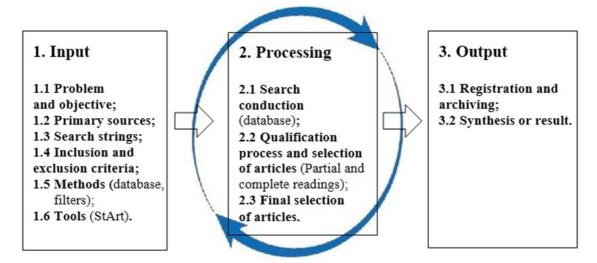
The research method used to prepare this article was the Systematic Literature Review (SLR). The creation of a well-structured basis for the good development of research and the correct approach to a subject is essential to facilitate the progress of research (Webster; Watson, 2002). Furthermore, it is necessary to identify the main and most important ideas brought by the publications for the consistent elaboration of a synthesis, as Watson and Webster (2020) guides.

SLR is developed in well-defined methodological steps, following a protocol, and allowing the researcher to analyze data in detail (Biolchini et al., 2007). This type of research allows other researchers to follow the same path, making it possible to guide and develop other research projects with the possibility of achieving new results and also pointing out gaps in the studied subject, indicating future research (De Aquino et al., 2020).

Following the recommendations of Levy and Ellis (2006) and of Conforto, Amaral and Da Silva (2011), three stages were adopted to perform SLR: input, processing, and output (Figure 1).



Figure 1 Roadmap for conducting the SLR



Source: Adapted from Levy and Ellis (2006) and Conforto, Amaral and Da Silva (2011).

Below, the subtopics explain the execution of each step mentioned in Figure 1.

2.1 Input

To optimize the elaboration of the SLR, the software developed by the Federal University of São Carlos (UFSCar), StArt (State of the Art through Systematic Review) was used. The software aims to support, assist, and facilitate researchers in carrying out their activities. As such, StArt present in the input and processing steps mentioned in Figure 1.

In StArt, protocols were built, which are parameters to be followed for the elaboration of the SLR. In the input stage, the problem, objective, sources, search strings, criteria for inclusion and exclusion of literature, method, and tools were defined. These parameters used in the entry stage are presented in Table 1.

Table 1 Parameters of the SLR entry stage

1.1 Problem	How are publications about social media for promotion and marketing in family farming configured?
1.2 Objective	To verify, through the Systematic Literature Review, research that addresses social media for promotion and commercialization used in family farming.
1.3 Primary sources	Scopus and Web of Science



1.4 Search strings	("digital technolog*" OR "social media" OR "social media marketing" OR "online marketing" OR "agricultural marketing" OR "agricultural platforms" OR "digital marketing" OR "digital platform*") AND ("smallholder*" OR "smallholder farms" OR "rural farmers" OR "family farm*" OR "small farmer")			
1.5 Inclusion criteria	Present social media content for promotion and marketing related to family farming.			
1.6 Exclusion criteria	 Does not present social media content for promotion and commercialization related to family farming; Addresses the terms individually, without having any connection; Approaches the content superficially, does not include it as the main objective of the analyzed work. 			
1.7 Method and tools	The method used was based on studies by Levy and Ellis (2006) and Conforto, Amaral and Da Silva (2011), in addition to the use of the StArt tool.			

Source: Prepared by the authors.

The research problem and its objective mentioned on Table 1 directed the searches in the databases, which, for a preliminary bibliographic review, used terms such as 'smallholders', 'social media', and 'digital platforms'. As it is a current issue in the literature, it was defined that the databases with publications of greatest relevance to this SLR are Scopus and Web of Science.

With research in primary sources, it became possible to define search strings effectively so that the databases showed publications that met the inclusion criteria.

2.2 Processing

Although, in the entry stage, the criteria used in the searches have already been defined, Table 2 presents the results of the searches in the databases, with the details of the keywords used as well as the search strings. It also presents the results of the used filters.

The articles selected in the databases were saved in BIBTEX format to be imported by StArt for further analysis and application of the selection of articles. The chosen databases were Scopus and Web of Science, which are internationally recognized for the quality of the indexed articles. Although Scopus brings many Web of Science collections, resulting in a large number of duplicate documents, we chose to use both databases because, as it can be seen in the results, documents were found on Web of Science that



were not indexed by Scopus. However, with the chosen filter of 'only articles' and the interval of years, this number resulted in only two articles that were considered relevant, since there is a small production on the subject.

Table 2 Criteria and filters used for the selection and collection of articles of interest

Database	Scopus	Web of Science		
Collection date	June 28, 2022	June 28, 2022		
Keywords	digital technologies, social media, social media, social media, social media marketing, online marketing, agricultural marketing, digital marketing, agricultural platforms, digital platform, smallholder, smallholder farms, rural farmers, family farm, small farmer	digital technologies, social media, social media, social media marketing, online marketing, agricultural marketing, digital marketing, agricultural platforms, digitalplatform, smallholder, smallholder farms, rural farmers, family farm, small farmer		
Boolean search	(TITLE-ABS-KEY (("digital technolog*" OR "social media" OR "social media marketing" OR "online marketing" OR "agricultural marketing" OR "digital marketing" OR "agricultural platforms" OR "digital platform*")) AND TITLE-ABS-KEY (("smallholder*" OR "smallholder farms" OR "ruralfarmers" OR "family farm*" OR "small farmer")))	(TS=(("digital technolog*" OR "social media" OR "social media marketing" OR "online marketing" OR "agricultural marketing" OR "digital marketing" OR "agricultural platforms" OR "digital platform*"))) AND TS=(("smallholder*" OR "smallholder farms" OR "ruralfarmers" OR "family farm*" OR "small farmer"))		
Boolean search result	111 documents	41 documents		
Filter 1: document types	Articles only	Articles only		
Filter 1 result	82 articles	35 articles		
Filter 2: year	From 2010 to 2022	From 2016 to 2022*		
Filter 2 result	67 articles	33 articles		



Filter 3: exclusion of duplicate literature	-	28 articles
Filter 3 result	67 articles	5 articles
Filter 4: Preliminary Inclusion and Exclusion Criteria - Reading	Title, keywords and abstract	Title, keywords and abstract
Filter 4 result	19	2
Filter 5: inclusion and exclusion criteria – Reading	Introduction and conclusion	Introduction and conclusion
Filter 5 result	6	2

^{*} The Web of Science database did not allow the application of Filter 2 from the year 2010 onwards as performed in the Scopus database, because according to the applied Boolean search, nothing appears between the years 1995 and 2016 on the searched subject. Source: Prepared by the authors.

The use of several keywords in the construction of search strings (Boolean search) is due to the fact that it increases the chance of finding publications on the researched topic. For that, many attempts were made until we reached the presented format.

After applying the Boolean search in the chosen databases (Filters 1 and 2), the one hundred articles resulting from both databases were imported into StArt, to start the process of qualification and selection of these articles. Using the StArt tool, duplicate articles were excluded, (articles from the Web of Science database were chosen for exclusion). Thus, 28 duplicate articles were excluded from the Web of Science database, leaving only 5 articles for the application of Filter 4, and continuing with the 67 articles from Scopus.

After applying Filter 4, which is the reading of the title, keywords, and abstract of the articles, only 19 articles remained from the 67 Scopus articles. Similarly, from the 5 Web of Science articles, only 2 were likely to address the topics listed on Table 1 of this SLR.

With the application of Filter 5, which is the reading of the introduction and conclusion, articles that meet the inclusion and exclusion criteria determined in Table 1 were listed. Thus, from the 19 Scopus articles, only 6 articles were accepted, while from the 5 Web of Science articles, only 2 were selected. It is worth mentioning that 4 of the articles selected by Filter 5 were behind a paywall. These were excluded, as this SLR sought to analyze only open access articles, since, in some cases in which reading the introduction and conclusion were not enough to determine the content of the article, it



was necessary to carry out a superficial reading of the article itself as a whole to resolve doubts and determine its acceptance or exclusion.

Finally, a complete reading of the eight final articles was carried out, all of which met the approach criteria on the use of social media for promotion and commercialization in family farming. Therefore, these eight articles were accepted for the development of the present review.

Status

8(8%)

64
(64%)

Accepted Rejected Duplicated

Figure 2 Status of the results of the analysis of articles

Source: Prepared by the authors through StArt.

For a better visualization of the final data, Figure 2 presents the amount of results obtained from accepted, rejected, and duplicate articles.

2.3 Output

In the output stage, the registration and archiving of articles was carried out. Table 3 presents, in detail, the data of the final articles selected, such as the database, title, authors, year of publication, and journal.

Table 3 Selected final articles

No.	Database	Title	Authors	Year	Journal
1	Scopus	Socioeconomic drivers of mobile phone adoption for marketing among smallholder irrigation farmers in South Africa	Sikundla, T.; Mushunje, A.; Akinyemi, B. E.	2018	Cogent Social Sciences



2	Scopus	The impact of unifying agricultural wholesalemarkets on prices and farmers' profitability	Levi, R.; Rajan, M.; Singhvi, S.; Zheng, Y.	2020	Proceedings of the National Academy of Sciences of the United States of America (PNAS)
3	Web of Science	Family farming and digital platforms in the context of COVID-19. South American initiatives	Zuñiga, N. C.; Montilla, I. L.; Zuñiga, E. C.	2020	Espacio Abierto
4	Scopus	Digital marketing in the system of promotion of organic products	Novytska, I.; Chychkalo- Kondratska, I.; Chyzhevska, M.; Sydorenko- Melnyk, H.; Tytarenko, L.	2021	WSEAS Transactions on Business and Economics
5	Scopus	Digital inclusion in social media marketing adoption: the role of product suitability in the agriculture sector	Han, H.; Xiong, J.; Zhao, K.	2021	Information Systemsand e- Business Management
6	Scopus	Village Environment, Capital Endowment, and Farmers' Participation in E- Commerce Sales Behavior: A Demand Observable Bivariate Probit Model Approach	Li, X.; Sarkar, A.; Xia, X.; Memon, W. H.	2021	Agriculture
7	Scopus	Small Farmers' Use of Social Media and Other Channels for	Moreno-Ortiz, C. A.; Peterson, D. J.; Collart, A. J.;	2021	Journal of Extension

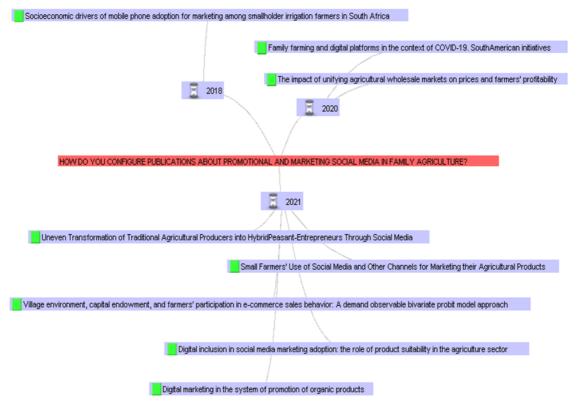


		Marketing their Agricultural Products	Downey, L.; Seal, S.; Gallardo, R.		
8	Web of Science	Uneven Transformation of Traditional Agricultural Producers into Hybrid Peasant- Entrepreneurs Through Social Media	Hovardaoglu, O.; Calisir- Hovardaoglu, S.	2021	Journal of Rural and Community Development

Source: Prepared by the authors.

For a better visualization of the years in which the final articles selected in this SLR were published, Figure 3 presents the titles of the published articles linked to the year of publication, in which the item highlighted in red in the center of the figure is the research question of this SLR. This way, it is also possible to analyze the publication growth evolution of articles that approach the theme and objective of this SLR.

Figure 3 Number of publications, per year, on the SLR theme



Source: Prepared by the authors through StArt.



As can be analyzed, the concentration of publications on the subject of this SLR is in 2021, which points to a growth of publications from 2018. However, until the month of June of the year 2022, period of preparation of this SLR, there are no publications on the topic in the researched databases.

As part of this stage and also meeting the objective of this SLR, social media and its use by family farmers were highlighted in the articles, and this information is pointed out on Table 4.

3. Results and Discussions

As a result of the last exit stage and beginning of Results and Discussions, Table 4 presents the final selected articles. This table contains the authors, the 'social media' column (which describes the social media used for promotion and marketing identified by the article authors, used by small farmers), as well as the 'purpose' column (which showcases the aim of the social media to the farmers who use it).

Table 4 Social media mentioned in the selected articles as well as purposes of their use

No.	Authors	Social media	Purpose
1	Sikundla et al.	Short Message Services	Promotion and
		(SMS)	commercialization
2	Levi et al.	Unified Market Platform	Commercialization
3	Zuñiga et al.	Digital social networks,	Promotion and
		instant messaging systems	commercialization
		and web pages	
4	Novytska et al.	Social networks	Promotion and
			commercialization
5	Han et al.	WeChat	Promotion and
			commercialization
6	Li et al.	E-commerce	Commercialization
7	Moreno-Ortiz	Social media platforms:	Promotion and
	et al.	Facebook, Twitter,	commercialization
		Instagram, Pinterest,	
		Snapchat, Youtube,	
		LinkedIn, Wikis, Blogs	
		among others	
8	Hovardaoglu	Social networks,	Promotion and
	and Calisir-	e-commerce	commercialization
	Hovardaoglu		

Source: Prepared by the authors.



are social networks or social media, such as WeChat, which is similar to WhatsApp; the sites; and, to a lesser extent, SMS, which are used for promotion and commercialization in business.

After the analytical readings of the selected final articles, and also in compliance with the SLR objective, which is to seek publications that address social media for promotion and commercialization used in family farming, it was possible to arrive at the systematization presented in the following items, compiling the main contributions of the selected articles:

I - Sikundla et al. (2018) carried out a research in South Africa, in which they interviewed 97 small producers that are part of the Qamata Irrigation Scheme (QIS), the results show that 71% of farmers market their products to local and private traders, and 55% sell only to relatives and neighbors. The means used for marketing and carrying out agricultural marketing is **Short Message Services (SMS)**. Women and producers who receive government subsidies use SMS less, and socioeconomic conditions influence the use of this tool, due to cell phone expenses, erratic network of service providers such as MTN, Cell C and Vodacom that are installed in big cities, hindering good reception of networks in remote places, and taxes for high antenna usage time.

II - Levi et al. (2020) corroborate that the governments of developing countries have invested in the well-being of small farmers. Among the developing countries is India, specifically the government of Karnataka, in 2014 created the **Unified Market Platform**, an online agricultural platform where all producers can offer their products online, connecting markets, allowing an increase in competition and profitability. The authors analyze this digital platform focusing on the state of Karnataka, pointing out that the digital platform provides positive results and increase in profits for some products, although it needs investment in integrated logistics, grouping batches of similar quality to facilitate the search of traders and increase the efficiency of product bidding.

III - Zuñiga et al. (2020) carried out an exploratory-descriptive and theoretical-reflective research, collecting news data from some South American countries (Argentina, Brazil, Chile, and Colombia). The results indicate that during the Covid-19 pandemic, family farmers have used digital platforms of social networks, instant messaging systems and web pages to communicate, promote and commercialize their products with the support and initiative of their countries as an instrument to circumvent and overcome the restrictions imposed by the pandemic. The authors explain that some of the family farmers used digital platforms before, intensifying their use during the pandemic. However, the creation of public policies to support the development and discussion of this issue and to meet the needs of family farmers is still necessary.



IV - Novytska et al. (2021) point out that digital marketing is widely used by family farmers of organic products in European Union countries, with **social networks** as their main channels for promoting and marketing products, as long as it does not require additional costs for a digital marketing specialist. Digital marketing in family farming of organic products is at an early stage, still under development, due to the few employees in family farming and the lack of adequate structure in this environment. The authors point out that digital marketing does not contribute effectively to this environment, as farmers do not have the necessary resources to invest, develop or hire an expert, requiring an investment by the government.

V - Han et al. (2021) state, through exploratory research in China, that small farmers widely use the WeChat digital platform to promote and commercialize their products. This tool allows farmers to be part of the digital inclusion movement and encourages the use of social media marketing in rural areas, besides, farmers may have some difficulty in using Information and Communication Technologies (ICT). The authors point out in their research that older producers are more afraid to change or alter their digital media than younger ones. Nevertheless, older producers adopt WeChat to a greater extent as a form of social media marketing. Digital inclusion brings economic benefits to China and its farmers, facilitating the reduction of poverty, yet, investment in this area by government agencies and policymakers is still necessary, in order to support and develop this area.

VI - Li et al. (2021) carried out with structured questionnaires and interviews through household surveys applied to 686 families in Chinese villages and found that digital e-commerce platforms are widely used by small producers in those regions, resulting in significant sales. However, the authors state that it is necessary to improve investment and incentives in public policies in terms of physical (infrastructure, transport, etc.) and digital (promoting courses, training, improving intellectual capital, investing in social networks, and improving communication channels and information gathering practices, among others).

VII – Moreno-Ortiz et al. (2021), when noticing the emergence of new small farmers in Mississippi (USA) due to changes in the local food market and the need of consumers to obtain information about the purchased products, applied questionnaires to a total of 169 farmers located in the north of the state, seeking to analyze the view of family farmers on the use of social media platforms (Facebook, Twitter, YouTube, etc.) for marketing and selling products.

As a result, they found that the majority of participants (98.2%) chose street markets as a means of promotion and marketing, while 47.3% prefer social media as a



means of promoting and marketing. However, more men than women prefer roadside stalls. Participants aged between 18 and 54 prefer social media more than those aged over 55.

Most participants agreed in the survey that social media facilitates work processes, as well as promoting their business and products, increasing sales and productivity. In short, the **social media platforms** used by family farmers are: **Facebook, Twitter, Instagram, Pinterest, Snapchat, Youtube, LinkedIn, Wikis, Blogs, among others**, with Facebook being the most common. Finally, what makes it difficult to commercialize products in various channels, from street markets, roadside stalls, among others, is the low flow of customers and, when it comes to joining sites, are the expensive fees. Still, the use of social media can overcome the barrier of low customer flow, as well as the need for an educational outreach program for farmers to maximize social media use.

VIII – Hovardaoglu and Calisir-Hovardaoglu (2021), noting a gap in research on the influence of social media on smallholder marketing, carried out a survey in Kayseri province, Turkey. In the research, the authors address three questions, the first of which was applied with open answers to 297 family farmers regarding the use of Information Technology (ICT) and internet. The second was applied with the same methodology to 198 producers regarding the purpose of such uses, and finally, the third was applied through semi-structured interviews to 23 producers regarding the use of social media.

As a result of the first question, the authors found that family farmers do not have difficulty with infrastructure to use ICT, and that younger farmers are more likely to use smart devices and the internet. In the second question, the use of the internet is intended to maintain contact with family members of small producers and other communications, as well as for exchange and search of information, providing several options for accessing alternative markets.

Finally, the family farmers who participated in the social media survey claim that they are active users of **social media and e-commerce**, which are their main tools for contacting their families and professional networks. They are easy for people to familiarize themselves with, and simple ways to manipulate and share texts and images.

With the use of social media, it was possible to improve issues of digital marketing and online sales, directly accessing customers, creating their own market, increasing profit, promoting the brand, and creating social media easy and free of charge, (unlike web pages, which are more complex). However, to serve the public online, it was necessary to buy a van for weekly deliveries, and logistics in rural areas were pointed out as difficulties by family farmers, in addition to the costs of adequate packaging for transporting the products and guaranteeing food safety. In addition, the issue of



reliability is listed, in which farmers prefer to sell their products to customers they already know, since selling their products online to unknown consumers provides some reliability issues. So, most respondents point to social media as secondary activity for the commercialization of its products, being the traditional activity of marketing and direct sales primary.

The eight previous items sought to systematize the main contributions of this SLR, indicating what has already been addressed, at the same time showcasing some gaps and future paths to be followed, such as the need for investments in public policies and investment, development, and better use of social media by family farmers. In addition to observing the gaps for the better development of social media for family farmers, the benefits are also present, such as increased sales, profits, integration in the digital environment, among others.

In addition to the importance of the contents covered in the articles and their notes, the journals in which the articles are indexed are also relevant for analysis. Figure 4 shows the number of citations that each article has received so far. Journals have their own citation control, except for the journal of the work of Novytska et al. (2021), which does not have any information regarding the number of citations, therefore, it is not included in Figure 4.

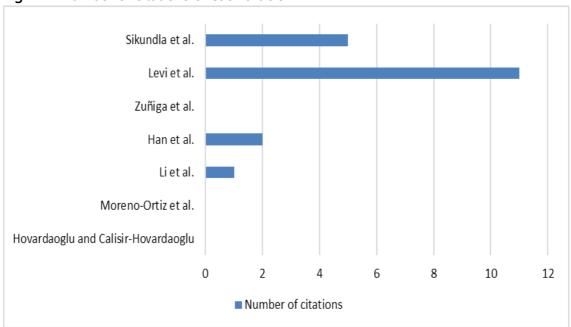


Figure 4 Number of citations of each article

Source: Prepared by the authors with data from the respective journals.

Figure 4 displays, through the information exposed by the journals that are



indexed, that many articles still do not have citations. Nevertheless, the articles may have been cited in works and not presented in the journal count. The highlight itself is the greater number of citations of the work by Sikundla et al. (2018) and Levi et al. (2020), pointing to a greater demand and use of these documents and their contents as references in other publications.

When it comes to viewing the articles, the journals in which the articles from Levi et al. (2020), Zuñiga et al. (2020), Novytska et al. (2021), Moreno-Ortiz et al. (2021), and Hovardaoglu and Calisir-Hovardaoglu (2021) are indexed do not have visualization control. However, Sikundla et al. (2018) has a total of 1,975 views, Han et al. (2021) has 3,061 views and, finally, Li et al. (2021) has 1,159 views.

Although in some cases there is no information, Figure 4 and the results of the visualizations in each article provide a view of the public's interest for certain works, as well as the relevance of these articles for the scientific community, in addition to possible research when it comes to similar subjects.

4. Final Remarks

It was possible to perceive that the use of social media by small producers has positive results and significant returns, enabling an increase in sales, dissemination, and competitiveness in the market.

This SLR also indicates that the publications in the databases used in this field of study are recent, with the oldest article published in the year of 2018, pointing out that the subject began to be researched and to receive more attention recently, in addition to the initiatives that are still at an early stage. It was observed that with the advent of the pandemic, there was an increase in the adhesion of producers to social media and, consequently, greater scientific production that seeks to understand such potentialities and challenges as an instrument to face a situation of social isolation, but which may become, in the future, one of the main promotion and marketing channels for family farming. Such potential, as the authors indicated, depends on investments and training so that the use of social media really becomes a possible reality for this segment.

In addition to the benefits that the use of social media provides, there are challenges to be overcome, as well as the existence of management difficulties on the part of family farmers, the need to encourage public policies, support, and training for the development of the area, among others.

As an indication of future research, there is a need for greater depth in this theme, with data collection and research with family farmers, in order to identify and analyze their needs and difficulties in the use of social media for the promotion and



commercialization of their products.

Declaration of Conflicting Interest

The Author(s) declare(s) that there is no conflict of interest.

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was funded by the Coordination for the Improvement of Higher Education Personnel (CAPES).

References

- Biolchini, J. C. de A., Mian, P. G., Natali, A. C. C., Conte, T. U., & Travassos, G. H. (2007). Scientific research ontology to support systematic review in software engineering. *Advanced Engineering Informatics*, *21*(2), 133-151.
- Bonina, C., Koskinen, K., Eaton, B., Gawer, A. (2021). Digital platforms for development: Foundations and research agenda. *ISJ Information Systems Journal*, *31*(6).
- Conforto, E. C., Amaral, D. C., Da Silva, S. L. (2011). Roteiro para revisão bibliográfica sistemática: aplicação no desenvolvimento de produtos e gerenciamento de projetos. In *Congresso Brasileiro de Gestão de Desenvolvimento de Produto CBGDP*, Porto Alegre, Rio Grande do Sul.
- Constantinides, P., Henfridsson, O., Parker, G. G. (2018). Introduction—Platforms and Infrastructures in the Digital Age. *Information Systems Research*, *29*(2).
- Cusumano, M. A., Gawer, A., & Yoffie, D. B. (2021). Can self-regulation save digital platforms? *Industrial and Corporate Change*, *30*(5), 1259-1285.
- De Aquino, E. L. R., Mollo Neto, M., Bernardo, C. H. C., Morais, F. J. de O., Dos Santos, P. S. B. (2020). Ferramentas de manutenção preditiva de motores diesel: uma revisão bibliográfica sistemática. *Research, Society and Development, 9*(11), 1-31.
- Gazolla, M., De Aquino, J. R. (2021). Reinvenção dos mercados da agricultura familiar no Brasil: a novidade dos sites e plataformas digitais de comercialização em tempos de Covid-19. *Estudos Sociedade e Agricultura, 29*(2), 427-460.
- Han, H., Xiong, J., Zhao, K. (2021). Digital inclusion in social media marketing adoption: the role of product suitability in the agriculture sector. *Information Systems and e-Business Management*.
- Hovardaoglu, O., Calisir-Hovardaoglu, S. (2021). Uneven Transformation of Traditional Agricultural Producers into Hybrid Peasant-Entrepreneurs Through Social Media. *Journal of Rural and Community Development, 16*(1), 86-107.
- Kaplan, A. M., Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, *53*, 59-68.
- Kietzmann, J. H., Hermkens, K., Mccarthy, I. P., Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, *54*(3), 241-251.
- Levi, R., Rajan, M., Singhvi, S., Zheng, Y. (2020). The impact of unifying agricultural wholesale markets on prices and farmers' profitability. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 117(5), 2366-2371.
- Levy, Y., Ellis, T. J. (2006). A Systems Approach to Conduct an Effective Literature Review in Support of Information Systems Research. *Informing Science: The International Journal of an Emerging Transdiscipline*, *9*, 181-212.



- Li, X., Sarkar, A., Xia, X., & Memon, W. H. (2021). Village environment, capital endowment, and farmers' participation in e-commerce sales behavior: A demand observable bivariate probit model approach. *Agriculture*, 11(9), 1-20.
- Mishra, S., Tripathi, A. R. (2020). Literature review on business prototypes for digital platform. *Journal of Innovation and Entrepreneurship*, *9*(23).
- Moreno-Ortiz, C. A., Peterson, D. J., Collart, A. J., Downey, L., Seal, S., & Gallardo, R. (2021). Small Farmers' Use of Social Media and Other Channels for Marketing their Agricultural Products. *Journal of Extension*, *59*(4).
- Novytska, I., Chychkalo-Kondratska, I., Chyzhevska, M., Sydorenko-Melnyk, H., Tytarenko, L. (2021). Digital marketing in the system of promotion of organic products. *WSEAS. Transactions on Business and Economics*, *18*, 524-530.
- Organização das Nações Unidas para a Alimentação e a Agricultura FAO. *Celebrando a contribuição dos agricultores familiares para o Fome Zero e dietas mais saudáveis*, 2019. https://www.fao.org/brasil/noticias/detail-events/fr/c/1195906/. Accessed on October 8, 2021.
- Sikundla, T., Mushunje, A., & Akinyemi, B. E. (2018). Socioeconomic drivers of mobile phone adoption for marketing among smallholder irrigation farmers in South Africa. *Cogent Social Sciences*, *4*(1), 1-12.
- Watson, R. T., Webster, J. (2020). Analysing the past to prepare for the future: Writing a literature review a roadmap for release 2.0. *Journal of Decision Systems, 29*(3), 129-147.
- Webster, J., Watson, R. T. (2002). Analyzing the past to prepare for the future: writing a literature review. *MIS Quarterly*, *26*(2), 13-23.
- Zuñiga, N. C., Montilla, I. L., Zuñiga, E. C. (2020). Family farming and digital platforms in the context of COVID-19. South American initiatives. *Espacio Abierto: Cuaderno Venezolano de Sociología, 29*(4), 85-105.

RESUMO:

A agricultura familiar fornece grande parte da diversidade de alimentos disponíveis mundialmente. Se por um lado tem-se sua eficiência produtiva, no âmbito do manejo das mais diversas culturas, do outro lado tem-se o desafio na promoção comercialização de seus produtos. Este artigo busca por meio de uma Revisão Sistemática de Literatura (RSL) e o uso da ferramenta StArt, verificar, com a análise de pesquisas publicadas nas bases de dados Scopus e Web of Science, a utilização das mídias sociais de promoção comercialização na agricultura familiar. Os resultados indicam que a utilização das mídias sociais na agricultura familiar é benéfica, trazendo resultados positivos, no entanto, carece de incentivos, investimentos e atenção das políticas públicas.

PALAVRAS-CHAVE: Agricultura familiar; Plataformas digitais de comercialização; Plataformas digitais de promoção; Revisão Sistemática de Literatura; Mídias sociais.

RESUMEN:

La agricultura familiar proporciona gran parte de la diversidad de alimentos disponibles en todo el mundo. Si por un lado está su eficiencia productiva, en el ámbito del manejo de las más diversas culturas, por otro lado está el desafío en la promoción y comercialización de sus productos. Este artículo busca, a través de una Revisión Sistemática de Literatura (SLR) y el uso de la herramienta StArt, verificar, con el análisis de investigaciones publicadas en las bases de datos Scopus y Web of Science, el uso de las redes sociales para la promoción y comercialización en la agricultura familiar. Los resultados indican que el uso de las redes sociales en la agricultura familiar es beneficioso, trayendo resultados positivos, embargo, carece de incentivos, inversiones y atención de las políticas públicas.

PALABRAS CLAVES: Agricultura familiar; Plataformas de marketing digital; Plataformas de promoción digital; Revisión Sistemática de la Literatura; Redes sociales.