

Communication media types for optimising yards in achieving family food security

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Abstract Food security, particularly at the family level, is closely linked to women farmers' effective utilisation of yards. This study emphasises the significance of communication media as valuable sources of information for optimising yard spaces. Various forms of communication media, including forums, electronic, digital, and print media, play a crucial role in this context. The research employs a quantitative approach with qualitative data, adhering to a post-positivistic paradigm. Cluster sampling was used, involving 103 women farmers as the sample group. Quantitative data processing and analysis were performed using the scoring and descriptive methods. The findings reveal that direct communication methods, such as consulting neighbours, family members, fellow farmers within women's groups, and external contacts, are preferred by women farmers. Indirect communication via forums like WhatsApp (WA) meetings also serves as an essential platform for discussions, information exchange, and sharing experiences related to yard utilisation.

Keywords: communication; food security; media; yards optimisation

INTRODUCTION

Food security is a pressing national concern around the ability to provide for family food needs. Scholars like Kurniasih (2015), Ali & Sonderling (2017), Arifin (2018), and Dharmawan *et al.* (2019) emphasise the growing significance of food security, food sovereignty, and food self-reliance, particularly at the grassroots level, where families aim to reduce household food expenses by utilising their yard spaces. Effectively using yard space is a key strategy for raising community awareness and contributing to family welfare. Cultivating vegetables in one's yard simplifies access to nutritious food, strengthening the family's nutritional security.

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Enhancing community knowledge and understanding about the effective use of yards is a crucial element of empowering the community. Uninterrupted communication is crucial to maintain these endeavours. Therefore, from a communication standpoint, it is essential to actively involve the community in these activities, engaging all family members in utilising the garden. Well-maintained and efficiently managed yards can provide significant advantages for their caretakers.

Communication is pivotal in disseminating information, whether it pertains to government programs or not. Effective communication helps raise awareness, knowledge, and willingness to participate in development initiatives. It serves as the connecting bridge and strategic tool for the success of development programs. The need to convey these programs to the community, fostering their active involvement, is crucial, and one way to achieve this is through socialisation efforts. Robot & Wawengkang (2014) indicated that village governments utilise various forms of communication, such as group and individual interactions, to socialise development programs to the community. This highlights that socialisation can be conducted through direct and indirect communication channels, leveraging various media. Communication media is vital in disseminating information to the general public, allowing everyone to access and convey essential information through these channels.

Bogor Regency, as noted by Arifin *et al.* (2012), Jatta (2013), and Belinda and Rahmawati (2017), enjoy favourable conditions for year-round plant growth. It is a critical buffer area for the capital and is known for vegetable production. Azra *et al.* (2014) suggested that even though the yard space may be limited, it can be utilised for ornamental and food plants, effectively supporting household needs, intensifying land use, and ensuring sustainable income. The yard presents a valuable resource that women farmers can tap into to produce food for their families. Ackerman *et al.* (2014), Sumardjo *et al.* (2016), Prasetyo *et al.* (2016), Darwis *et al.* (2019), Jayaprakash & Pillai, (2022) have highlighted the manifold benefits of yard utilisation, aligning with the three sustainability pillars: economic, social, and environmental.

Farmers must be determined to maximise the productivity and aesthetic appeal of the "Wanita Tani" yard. Therefore, women farmers can benefit from alternative sources of knowledge provided by various communication media. Although some women farmers within the group have experienced the advantages of yard utilisation, they have not been able to harness its full potential, often due to limited active participation from group administrators. Additionally, there is a prevailing notion that home vegetable cultivation is merely a hobby, resulting in limited diversification of vegetables and traditional food and beverage preparations. Yard utilisation remains rooted in tradition and has yet to adopt modern technology, primarily focusing on meeting family needs rather than pursuing business opportunities.

Technological progress greatly improves the accessibility of knowledge for communities and female farmers through many media platforms. Nevertheless, the widespread use of communication media must be accompanied by the ability of female farmers to employ them efficiently in accordance with their distinct requirements and capacities. Indirect communication refers to several systems that provide distinct benefits for enhanced accessibility. In light of this situation, it is crucial to promote communication channels that are easily available to female farmers as sources of information for maximising the productivity of their land and ensuring food security for their families.

The research poses intriguing questions: What roles do communication media play, and what types of communication media do women farmers employ in optimising homestead land? Furthermore, what kinds of information do women farmers rely on when enhancing their homestead land? This study aims to uncover the roles and types of communication media women farmers utilise in optimising homestead land while also investigating the information sources they rely on.

METHODOLOGY

This study utilises a quantitative methodology, supplemented by qualitative data analysis, within the context of a post-positivist paradigm, typified by empirical observation and the examination of objective reality. This methodology guarantees that the research findings are based on actual experiences and can survive rigorous scientific examination.

To select the research sample, we adopted a cluster sampling technique, organised according to regional zones, intentionally choosing 103 women farmers, constituting 44% of the total population. The primary focus of this study centred on nine (9) women farmer groups situated in Bogor Regency, encompassing a total population of 234 women farmers. The population and sample details are summarised in Table 1 below.

Data collection methods included direct interviews and field observations as primary data sources. Additionally, secondary data were gathered from relevant journals on communication and agricultural programs, communication literature, documentation, and online resources.

For data processing and analysis, a quantitative approach was employed. The acquired data underwent analysis using both the scoring method and descriptive analysis. The scoring method involved indicators related to site or platform usage, media frequency, and media utilisation. These indicators were transformed into question parameters for measurement on an ordinal scale. The score measurement ranged from 1 to 4, categorising data into four levels: very low (score 1), low (score 2), medium (score 3), and high (score 4).

Table 1. Population and Sample of Women Farmers

No	Region	Group	Population (person)	Sample (person)
Bogor Regency				
(1)	<i>Urban</i>			
	1. Pabuaran	Idol	36	16
	2. Puspanegara	Yellow	30	13
	3. Nanggewer	United	33	14
(2)	<i>Semi-Urban</i>			
	1. Waringin victorious	Marwah	20	9
	2. Cibatok II	Blooming prosperously	25	11
	3. Bojong Jackfruit	Glow	20	9
(3)	<i>Rural</i>			
	1. Buncir Sand	Manunggal	25	11
	2. Sukatani	Sukatani Jaya	15	7
	3. Tangkil	Mandiri Building Prosperity	30	13
Total			234	103

Source: Data Processed by Author (2023)

The descriptive analysis method went beyond mere description by providing an in-depth understanding and explanations of observed facts. Data interpretation was carried out by presenting the results of the score measurements, which were transformed into indicator measurement levels: 1) Very low (0-25.00), 2) Low (26.00-50.00), 3) Medium (51.00-75.00), and 4) High (76.00-100.00).

RESULTS AND DISCUSSION

The Role and Types of Communication Media Utilised by Women Farmers for Optimising Homestead Land

Communication media plays a pivotal role in various aspects of life, with many women in farming communities incorporating it into their daily activities. Fatimayin (2018) states that communication is fundamentally an interaction within a social context. The *Oxford Advanced Learner's Dictionary of Current English* (2004) defines communication as conveying ideas, feelings, or information to others. Consequently, communication media serves as an intermediary tool for transmitting information in line with its communicative function, indirectly influencing people and serving as a source of entertainment.

The utilisation of communication media reflects the eagerness of farming women to access information pertinent to their homesteads. These communication media encompass direct and indirect methods, including digital, forum, print, and electronic media (Figure 1).

Based on the findings presented in Figure 1, the preferred forms of communication and types of communication media widely embraced by women farmers in their quest for yard optimisation information lean towards direct communication, scoring at 60.63 (falling within the medium category). In practice, direct communication predominantly

occurs during Women Farming Group meetings, which wield substantial influence over women farmers. Women farmers tend to actively participate in these meetings, enabling them to engage with fellow group members directly. Mulyandari et al. (2010) suggest that knowledge sharing thrives within these group meetings, typically held weekly or monthly, allowing women farmers to deliberate and exchange insights regarding yard land utilisation. This assertion aligns with the findings, indicating that farmers favour direct interaction over internet-based information searches. Furthermore, Nguyen *et al.* (2022) emphasise the impact of digital technology on the socioeconomic landscape in Vietnam, while Khan *et al.* (2022) assert that internet usage enhances marketing capabilities and income in Pakistan.

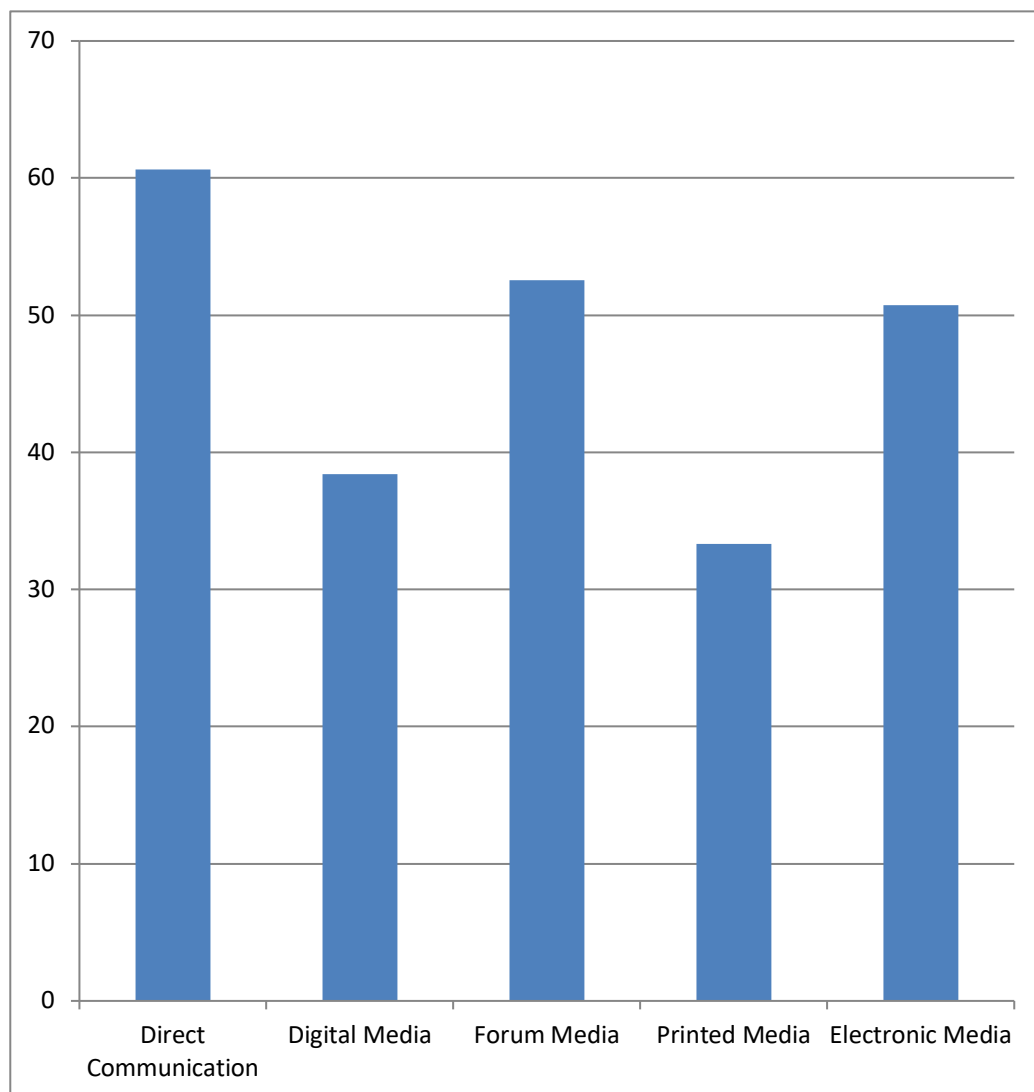


Figure 1. A comparison of scores related to the utilisation of communication forms and types of communication media among women farmers
Source: Author (2023)

According to the new media theory, technological innovations have led many women in agriculture to utilise new media platforms in their information-seeking endeavours. In the realm of indirect

communication via media, women farmers frequently turn to forum-based platforms, such as Whatsapp (WA), Facebook (FB), YouTube, Instagram (IG), Twitter, Line, and Blog, collectively scoring 52.55 (placing them in the medium category) as valuable sources of knowledge. Among these platforms, Whatsapp (WA) stands out as the primary choice for information searches, a pattern in line with the findings of Humaidi *et al.* (2020), which suggest that WA is the most frequently visited social media platform. This trend also aligns with Oktarina *et al.* (2019) research, indicating that forum media like Facebook and WhatsApp aim to facilitate communication within various groups. The high usage of WA stems from the fact that many farming women are active members of both internal and external groups, including women farmer groups, recitation groups, housing groups, and groups managed by the agricultural department, such as group leader and gardening groups.

Conversely, electronic media (50.72), digital media (38.40), and print media (33.32) are less frequently utilised by women farmers. Regarding electronic media, radio and television are the primary sources of yard land information. Digital media, represented by platforms like Google, cyber, Yahoo, and G-mail, is employed sporadically. Women farmers sometimes turn to Google for information about their yard activities and hobbies due to its user-friendly nature, allowing them to input keywords for specific information searches. However, most women farmers do not actively engage with print media, such as newspapers, magazines, tabloids, bulletins, brochures, and leaflets.

Variations in the utilisation of communication media are linked to the accessibility and technological proficiency of women farmers. Women farmers who extensively utilise their yard spaces often exhibit limited technological literacy. This situation is predominantly due to their roles as homemakers despite having a relatively high level of education, often graduating from high school. Consequently, their engagement with digital media remains relatively infrequent. Research by Kadir and Prasetyo (2021) confirms that farmers' internet usage tends to decrease with age, and a higher educational attainment correlates with a greater likelihood of using the Internet.

Information Types and Media Utilisation Among Women Farmers for Yard Optimisation

The types of information disseminated through various communication media exhibit considerable diversity, tailored to the specific needs and preferences of women farmers as users. Many women farmers seek information related to yard optimisation, particularly concerning suitable vegetable varieties for their yards, proper cultivation techniques, and environmentally friendly planting materials. These sought-after details are delivered through direct and indirect communication forms, encompassing forums, electronic media, digital platforms, and print media. Table 2 provides an overview of the types

of information and their corresponding communication forms and media usage.

Table 2 illustrates the diverse communication forms and media women farmers employ in their quest for yard land information. These communication channels possess unique advantages, serving as valuable information sources. One key reason behind women farmers' limited smartphone or mobile phone usage is their modest technological literacy. In Bogor Regency, women farmers predominantly rely on information from extension workers, contrasting with those who independently seek information. This aligns with Oktarina *et al.* (2010) research, which highlights that women farmers not only acquire information from agricultural extension workers (PPL) but also actively seek it from neighbours and utilise various communication media.

The sought-after information by many women farmers concerning yard land utilisation encompasses topics such as suitable vegetable varieties, environmentally friendly planting materials, cultivation techniques, pest and disease control, agricultural product processing, and marketing strategies. These communication forms and media enable women farmers to foster friendships, share information, engage in discussions, exchange experiences, access learning resources, and promote their products. The numerous benefits of these interactions lead women farmers to participate in group meetings actively.

Women farmers use direct and indirect communication methods when seeking information about yard land utilisation. Direct communication is characterised by collaborative efforts and timely interactions, primarily involving groups of women farmers in their pursuit of information related to homestead land utilisation. Women farmers often ask neighbours, family members, fellow group members, and individuals outside their farming circles during group meetings and designated schedules. This preference is rooted in social relationships and emotional bonds, such as close family ties, and the tendency for many women to join these groups (Prihtanti *et al.*, 2007; Malta, 2016). While group meetings may not always involve an instructor, all activities are meticulously scheduled, whether with an instructor or volunteer assistant. A companion's presence remains essential, with routine activities serving as platforms for fostering friendships, engaging in discussions, and sharing experiences. The findings of Far Far (2011) affirm that farmers rely more on interpersonal communication than mass media when seeking information, primarily due to their relatively limited knowledge levels.

Table 2. Information Types and Utilisation of Information Media

No	Type of Information	Forms of Communication and Types of Media	Utilisation of Information Media
1.	<ul style="list-style-type: none"> - Types of suitable vegetables - Vegetable maintenance guidelines - Appropriate yard planting media 	<ul style="list-style-type: none"> - Direct communication - Women Farmers Group (KWT) 	<ul style="list-style-type: none"> - Foster friendship - Facilitate discussions - Share group meeting updates
2.	<ul style="list-style-type: none"> - Easily cultivated yard vegetables - White leaf disease prevention for chili plants - Liquid organic fertiliser - Processed food Forum 	<ul style="list-style-type: none"> Forum - <i>WhatsApp</i> (WA) - <i>Facebook</i> (FB) - <i>YouTube</i> 	<ul style="list-style-type: none"> - Foster friendship - Facilitate discussions - Share experiences - Promote and market product
3.	<ul style="list-style-type: none"> - Hydroponics - Food plot development - Vegetable utilisation - Family medicinal plants (toga) 	<ul style="list-style-type: none"> Electronic - TV - Radio 	<ul style="list-style-type: none"> - Access current information - Stay informed about technological developments - Utilise instructional resources - Keep up with agricultural news - Enjoy songs and entertainment
4.	<ul style="list-style-type: none"> - Yard usage information and visuals 	<ul style="list-style-type: none"> Digital - <i>Google</i> 	<ul style="list-style-type: none"> - Access current information - Stay informed about technological developments - Utilise instructional resources
5.	<ul style="list-style-type: none"> - Seed and fertiliser selection - New pesticide products and similar items 	<ul style="list-style-type: none"> Print - <i>Brochure</i> 	<ul style="list-style-type: none"> - Stay updated on technological advancements - Access training information

Source: Data Processed by Author (2023)

Indirect communication encompasses various media formats, including forums, electronic platforms, digital tools, and print media. Forum-based media often emerge due to shared community objectives, including social media platforms. Puntoadi (2011) explains that social media consists of website-based features that facilitate networked communication within communities, serving as a medium for accessing information through forums or groups. In this study, media forums encompass WhatsApp (WA), Facebook (FB), YouTube, Instagram (IG), Twitter, Line, and Blogs. WhatsApp (WA) stands out as a favoured

platform among women farmers for obtaining information related to land use, aligning with the findings of Humaidi *et al.* (2020) and Oktarina *et al.* (2020), which highlight WA as the most frequently visited and used social media platform for women farmers seeking information, especially regarding yard utilisation. WhatsApp serves as a platform for fostering friendships, discussions, knowledge sharing, promotions, marketing, and behaviour change, as supported by the research of Prihatiningsih *et al.* (2022), emphasising its significance in product socialisation and customer engagement.

Conversely, other platforms like Facebook (FB), YouTube, IG, Twitter, Line, and Blogs are seldom used for information searches related to land use, mainly due to limited participation from women farmers who possess accounts on these platforms. Furthermore, YouTube and IG are infrequently used as they demand substantial data quotas, resulting in sporadic access (typically once a month). Oktarina *et al.* (2019) research highlights that farmers and extension workers tend to access information via the Internet through videos or YouTube, often used to educate farmers on various agricultural practices, such as rice and vegetable cultivation.

Digital media is a digital avenue for women farmers to access information, utilising platforms like Google, cyber, Yahoo, and G-mail. As defined by Flew (2008), digital media, or new media, encompasses data, text, audio, and various image formats stored in digital form and disseminated through broadband optical cables, satellites, and microwave systems. Society is progressively encountering a novel approach to processing and distributing digital information facilitated by the Internet, the World Wide Web (www), and multimedia capabilities.

The limited utilisation of electronic media can be attributed to the declining ownership of radios, largely replaced by cellphones and Android devices. Additionally, television is less accessible to farming women due to their busy schedules, primarily occupied by household chores and other commitments. Print media serves as a channel through which women farmers access periodically published information. It encompasses newspapers, magazines, tabloids, bulletins, brochures, and leaflets, all of which fall under the low utilisation category. The decline in print media engagement is evident, with women farmers increasingly refraining from reading newspapers, and limited production costs have rendered brochures and leaflets underutilised among farming women.

CONCLUSION

In conclusion, communication media play a pivotal role in information dissemination, encompassing direct communication channels (involving interactions with neighbours, family members, fellow farmers, and individuals outside women farmer groups) and indirect methods through forum-based media (such as WhatsApp). The information sought by women farmers predominantly relates to easy-to-grow yard vegetables, strategies for combating white leaf disease in chilli plants, the creation of liquid organic fertilisers, and food processing. Information media are platforms for fostering friendships, facilitating discussions, sharing experiences, and seeking knowledge.

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