



Social Agriculture in Kenya

Farmers' stories of their use of social media for agricultural livelihoods

July 2022

by Habitus Insight and Caribou Digital with support from Kilimo Source
in partnership with the Mastercard Foundation



This report is part of an overall research study on social agriculture in Kenya and will be followed by research in Ghana and Nigeria.

All reports can be found at www.platformlivelihoods.com.

Acknowledgements

This report was written by Christian McDonough, Eliza Casey and Eoghan McDonough from Habitus Insight, with support from Caribou Digital. Special thanks to Robyn Read at the Mastercard Foundation for support and enthusiasm throughout the process and Nanjira Sambuli for her review and contributions to this study.

For questions about this study, please contact the Habitus team at eoghan@habitusinsight.com.

For questions about the social agriculture research, please contact Emrys Schoemaker at emrys@cariboudigital.com.

This report is the joint effort of the authors and research partners Kilimo Source, Learn.Ink, and Caribou Digital, in partnership with the Mastercard Foundation. The views presented in this paper are those of the authors and do not necessarily represent the views of the Mastercard Foundation.

Recommended Citation

Habitus Insight and Caribou Digital. *Social Agriculture in Kenya: Farmers' Stories of Their Use of Social Media for Agricultural Livelihoods*. Farnham, Surrey, United Kingdom: Caribou Digital Publishing, 2022. www.platformlivelihoods.com/social-agriculture-qualitative-report.



Habitus Insight is a multimedia research collective that tells stories about an ever-changing world and the human experience using ethnography, film, and photography.

www.habitusinsight.com



Caribou Digital is a research and advisory firm that seeks to change the world by helping organizations build inclusive and ethical digital economies.

All Caribou Digital reports are available at www.cariboudigital.net.



Kilimo Source (Kenya) was founded as a strategic partner in the social agriculture research project and offers agricultural research and training, facilitates access to a growing network of over 30,000 agricultural professionals, and provides broad-reach research and advisory services in agriculture and social media.

www.kilimosource.com



Learn.ink is a digital training platform enabling organizations to upskill rural audiences and workforces across Africa and Asia.

<https://learn.ink/>



This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-sa/4.0/>.

Readers are encouraged to reproduce material from this project for their own publications, as long as they are not being sold commercially. We request due acknowledgment and, if possible, a copy of the publication. For online use, we ask readers to check for updates and to link to the original resource on the project website.

Table of contents

| | |
|---|-----------|
| Executive Summary | 3 |
| 1 Research goals | 6 |
| 2 Defining social agriculture | 7 |
| 3 Methodology | 9 |
| 4 Meet the interviewees: Dynamic “agripreneurs” | 10 |
| 5 Journeys into social agriculture: Variations in engagement with social media | 12 |
| 5.1 Thomas uses social media simply to support his farming. | 12 |
| 5.2 Simon’s story shows a deeper and more intentional engagement with social media. | 13 |
| 5.3 Beatrice has intentionally built a significant presence on social media. | 13 |
| 5.4 Nearly all participants have a positive view of social media. | 14 |
| 5.5 Summary | 14 |
| 6 Uses of social media | 15 |
| 6.1 Searching for information is one of the main activities on social media. | 15 |
| 6.2 Social media is used to market and sell produce and services. | 20 |
| 6.3 Participating in online groups is central to social agriculture. | 23 |
| 6.4 Summary | 25 |
| 7 The importance and limits of community in the practices of social agriculture | 26 |
| 7.1 The circulation of information has strongly community-oriented aspects, but individuals also use information strategically to generate income for themselves. | 26 |
| 7.2 Groups are collaborative spaces also used by individuals for their own business purposes. | 28 |
| 7.3 Summary | 29 |
| 8 Social media platforms and how they are used | 30 |
| 8.1 The most popular and most-used platforms are Facebook, WhatsApp, and YouTube. | 30 |
| 8.2 Other platforms include Instagram, Twitter, LinkedIn, TikTok, and Telegram. | 33 |
| 8.3 Mobile money services like M-Pesa have a huge role in social agriculture. | 35 |
| 8.4 The effective use of social media for supporting and promoting farming and related businesses requires a fair amount of learning. | 35 |
| 8.5 Summary | 35 |
| 9 Problems and countermeasures on social media: Scammers, trust, bullying, and harassment | 36 |
| 9.1 Con men and scammers are a major problem on social media. | 36 |
| 9.2 A pervasive lack of trust makes buying and selling difficult. | 38 |
| 9.3 All participants report bullying is common on social media. | 38 |
| 9.4 Summary | 39 |
| 10 Gender perspectives | 40 |
| 10.1 The key gender issue that emerged from interviews was unsolicited messaging. | 40 |
| 10.2 Women also reported that men are unsupportive of women in farming. | 41 |
| 10.3 Among the male participants, there were a variety of different beliefs about women in agriculture. | 41 |
| 10.4 Summary | 42 |

| | |
|--|-----------|
| 11 Factors leading to exclusion | 43 |
| 11.1 Financial issues | 43 |
| 11.2 Wider problems of poverty lead to exclusion. | 44 |
| 11.3 The elderly and the rural “village” are associated with exclusion. | 44 |
| 11.4 Negative views of social media may also limit participation. | 45 |
| 11.5 Summary and directions for future research | 46 |
| 12 Conclusion and recommendations | 47 |
| 12.1 Conclusion | 47 |
| 12.2 Recommendations | 49 |
| References | 53 |
| Annex 1: Guidance for interviewees and interview questions schedule | 54 |
| Annex 2: Table of 21 in-depth interviews | 59 |
| Annex 3: Consent form | 60 |
| Annex 4. Research team and partners | 61 |

Executive Summary

*This project is an in-depth examination of a new form of agricultural practice observed in Kenya, in which farmers are using social media platforms in pursuit of their livelihoods. Agriculturalists use social media in three main ways: for information exchange, to create support mechanisms like online groups, and for market transactions. **Caribou Digital has defined these practices as “social agriculture.”***

The aims of the study are: to understand how Kenyan farmers are using the tools available to them on social media; to document their experience of using social media for their livelihoods; and to identify ways in which these practices might be supported by social media platforms and other stakeholders such as government and foundations.

The study aimed to work with and elevate the voices of Kenyan farmers and those involved in wider social agriculture practices and support their documentation of their lived experiences of the digital transformation of agriculture in Kenya. Central to this approach was a partnership with Kilimo Source, a research company run by a former accountant and now one of Kenya’s most influential social agriculturalists, managing active Facebook, WhatsApp, and YouTube communities. Kilimo Source led the ideation and research agenda, directing the project’s focus and identifying key issues and stakeholders for investigation. This research is a Kenyan-led enquiry into Kenyan-led innovation and experiences of the digital transformation of agriculture.



Key characteristics of social agriculturalists:

- The majority are young, in their twenties and early thirties. Most have higher education qualifications, with just over half in agriculture and related subjects.
- There is a wide spectrum of engagement with social media. Many use social media to help develop their farming practices, but there are also a few for whom social media has become a significant part of their overall livelihood activities by creating content.
- Social agriculturalists see themselves as forming a new and growing community of farmers and those in related roles who communicate and share via social media. Many call themselves “agripreneurs.” This term captures the sense they are dynamic and entrepreneurial individuals who engage in social media to pursue their individual goals.

Social media is used for buying and selling, for participating in online groups, and especially for accessing information.

- Participants use social media to access information, and in some cases to create content, about all aspects of farming, including: crops, techniques of cultivation, sourcing equipment and inputs, and marketing and selling produce. Social media has made selling and marketing much easier and is narrowing the gap between producers and clients.
- Online groups are where contacts are made, information is exchanged, and solutions are offered. Participants agree that “good” groups have discipline and focus, and a lot of help is available from group members. Administrators and moderators of “bad” groups allow posts that wander off topic and so introduce extraneous contributions.
- The uses of social media for selling and marketing, for participating in groups, and for accessing information show that social media has become an essential and integral part of social agricultural livelihoods.

The uses of social media for participating in groups and for accessing information reflect and sustain a definite sense of community. Much activity, however, is not community-oriented. Information is also gathered and used by individuals in pursuit of their own goals, and this information is not shared. Running groups can be a strategy for building reputation and income. Large groups can become a site of struggle for control. There is also negative behavior, like bullying and harassment, especially but not exclusively against women.

The two main platforms used are Facebook and WhatsApp. Facebook is widely used for posting, for group activities, and for information and advice. WhatsApp is used for messaging and for participating in groups that are closed and relatively private. These two platforms are the two most closely interlinked by user activities; users typically move contacts from Facebook to WhatsApp for private negotiations and finalizing deals. YouTube is also widely used for information and by agronomists to build their reputation. Other platforms, like Twitter and Instagram, have fewer users but may be growing. Telegram and TikTok are not widely used.

There are problems with scammers, lack of trust, bullying, and harassment on social media. The widespread activities of con men lead to a major lack of trust, which makes buying and selling more difficult. People have learned ways of doing “due diligence” to check that people are trustworthy and to avoid scammers. Bullying and harassment are frequently reported, especially against women. Women may limit their interactions to private messaging on WhatsApp and sometimes by joining women-only WhatsApp groups.

Gender plays a critical role in how both women and men navigate online space and social media platforms. A key finding is that many women face gender-based sexual harassment. This has been central to how women use the platforms, as they adopt methods to avoid unsolicited messages or images. Women also face negative attitudes when engaging in agriculture, as they face social beliefs that women should not be in agriculture, at least not publicly in their own right as farmers or in other agriculture-related roles.

Barriers to participation in social agriculture include lack of finance for investment, poverty, lack of education, old age, and negative views of social media. Lack of funds limits participation because of the cost of phones and data. A general constraint is the lack of funding for investment in farming. Some interviewees see “villages” as remote and cut off from modern urban developments, including the use of social media. They believe that the elderly in villages do not know about the internet or how to use smartphones, and the youth in villages, if they do use social media, are not interested in agriculture.

Recommendations are grounded in the views of the research participants, but in some cases the research team have had to go further to formulate the recommendations and indicate how they will address problems.

- Platforms need to find effective ways to verify the identity of users. Pseudo accounts, scams, and harassment create a major issue of lack of trust.
- Platforms, especially Facebook, need to find ways to block or curb frequent bullying and harassment.
- There is a need for more education to support new entrants and users in effectively using platforms.
- More agriculture-related information could be provided on dedicated agricultural websites and/or built into platforms, e.g., to help farmers time crop cycles and access daily market prices.
- There should be greater access to loans for agricultural development, especially for women.
- Financial institutions should be more flexible in how they evaluate loan securities for women and should consider initiatives that lend small amounts, including to women, without requiring collateral or security.
- There is scope for coordination between donors to support funding specifically for social agriculturalists.



- Further research is needed to increase security of payment systems, for example, exploring the integration of mobile payment providers and platforms.
 - Platforms could consider extending the lifetime of advertising-enabling features.
 - Further research is needed into what government and private funding institutions know about social agriculture and how they could support it.
 - Further research on the particular financial problems faced by women and by youth in social agriculture would be useful for any relevant funding institutions and networks.
 - Further research into negative views about social media, and the distribution of such attitudes in relation to rural-urban differences and educational differences, would frame the scope and scale of social agriculture and clarify barriers to participation.
-

1 Research goals

This report is part of a wider research project carried out by Caribou Digital in partnership with the Mastercard Foundation to understand how Kenyan farmers use social media platforms as part of their agricultural practices. This project takes a close look at a new form of agricultural practice observed in Kenya, where farmers are using social media platforms like Facebook and WhatsApp in pursuit of their livelihoods. Agriculturalists use social media in three main ways: for information exchange, to create support mechanisms, and for market transactions. **Caribou Digital has defined these practices as “social agriculture.”**

“We are observing a significant size of activity on social media platforms coming from farmers and others working or interested in agriculture around the world, specifically in countries with a high proportion of the workforce in agriculture.”¹

In Kenya, many farmers are engaging with social media. For example, the Digital Farmers Kenya Facebook group has 447,000 members, and the Kenya Dairy Farmers Forum, also on Facebook, has 278,000 members (on July 11, 2022). But thus far, farmers’ use of social platforms has captured little attention among researchers, government, and funding institutions. This report represents the first study to examine these practices in detail.

The aims of this study, therefore, are:

- to understand how Kenyan farmers are using the tools available to them on social media;
- to document their experience of using social media for their livelihoods;
- and to identify ways in which these practices might be supported with careful, intentional interventions to mitigate challenges and enable Kenyan farmers to use the tools and capabilities they already have.

The study aimed to work with and elevate the voices of Kenyan farmers and those involved in the wider social agriculture practices and support their documentation of their lived experiences of the digital transformation of agriculture in Kenya. Central to this approach was a partnership with Kilimo Source. This research company is run by a former accountant who is now one of Kenya’s most influential social agriculturalists, managing active Facebook, WhatsApp, and YouTube communities. Kilimo Source led the ideation and research agenda, directing the project’s focus and identifying key issues and stakeholders for investigation. This research is a Kenyan-led enquiry into Kenyan-led innovation and experiences of the digital transformation of agriculture.

1 Caribou Digital and Learn.ink, *The Ecosystem of “Social Agriculture.”*

2 Defining social agriculture

The analysis is guided by the definition of social agriculture that the Caribou Digital research team (see Annex 4), led by Jonathan Donner, has created:

“Social agriculture refers to a set of practices that support agricultural livelihoods—including information exchange, support mechanisms and markets—where these are based on the use of social media platforms in countries with a high proportion of their workforce in agriculture.”²

The three key elements of this definition can be further outlined as follows.

“Information exchange” refers to the gathering and sharing of information relevant to agriculturalists, such as cultivation methods, inputs, and prices and markets. “Support mechanisms” include organizations or groups through which agricultural practitioners support each other by a combination of peer-to-peer camaraderie, collective action, and financial or in-kind support. “Agricultural markets” in this context refers to the online buying and selling of goods and services related to agriculture.³

In describing social agriculture, “livelihoods” comprises the capabilities, resources, and activities required by a person working in agriculture.⁴ The focus here on practices and strategies rather than specific roles draws on the Sustainable Livelihoods framework developed in the early 1990s.⁵

“Social media” is used in a broad sense to describe a set of digital platforms that allow users to create and exchange information, ideas, and interests via virtual communities and networks. This covers services like Facebook, WhatsApp, YouTube, Instagram, TikTok, and more. The practices described in this research tend to arise from individuals who repurpose existing platform features to achieve their goals.

The comparative literature emphasizes “community” as a key aspect of social media, in particular the experience of online groups:

“Online groups within social platforms enable communities to come together at unprecedented speed and scale, facilitate the inclusion of marginalized people and can generate impact, and provide their members with a strong sense of community and belonging, despite not operating in physical space.”⁶

2 Caribou Digital and Learn.ink, *The Ecosystem of “Social Agriculture.”*

3 Caribou Digital and Kilimo Source, *Social Agriculture: A Literature Review*, 2.

4 Caribou Digital and Kilimo Source, *Social Agriculture: A Literature Review*, 2.

5 In particular, the definition from Chambers and Conway, “Sustainable Rural Livelihoods: Practical Concepts for the 21st Century.”

6 Caribou Digital and Kilimo Source, *Social Agriculture: A Literature Review*, 4.

This is also true in the context of social agriculture, where individuals share information and support, mainly in online groups. Their actions both reflect and sustain a sense of community—though this sense of community also has limits (see section 7).

It's important to note that researchers have used the term social agriculture in semantically different contexts, usually to refer to community development and social inclusion in agriculture. These usages have little to do with digital technologies.⁷ In the context and definition proposed in this study, the term social agriculture is notably absent from the literature. However, we infer the occurrence of our definition of social agriculture when the research and discussion intersects social platforms with agricultural livelihoods in countries with a high proportion of their workforce in agriculture.



⁷ Rhoades and Aue use the phrase social agriculture in the title of a USA-based study among agricultural broadcasters. Rhoades and Aue, "Social Agriculture: Adoption of Social Media by Agricultural Editors and Broadcasters," as cited in Caribou Digital and Kilimo Source, *Social Agriculture: A Literature Review*, 4.

3 Methodology

For this study, Kilimo Source and Habitus Insight used a two-stage process driven by Kilimo Source's experience, insight, and networks.

In the first stage, Cathy Kamanu from Kilimo Source carried out 20-minute interviews with 60 people involved in social agriculture in Kenya. The selection of interviewees was based on Kilimo Source's expert knowledge and extensive networks in the sector. Some participants were also recruited from a social media campaign. The sample of interviewees was intended to be heterogeneous to reflect the range of roles in social agriculture. There was a bias towards a gender balance. The interviewees were located in a mix of different counties in central Kenya and included social agriculturalists in rural, urban, and semi-urban locations. All interviews were conducted via video call.

The second stage was to select a group of 21 people from the original 60 for in-depth interviews designed to find out their experiences and opinions about the use of social media in relation to their livelihoods, and the opportunities and challenges this entailed. Kilimo Source selected the group to achieve a balance of different roles and practices and to ensure sufficient representation of youth and women. In preparation for the interviews, the aims of the research were explained to interview participants (see Annex 1). Interviewees were also introduced to what to expect in the actual interview, namely that the interview process would be informal and open-ended. All interviews were conducted via video call.

The semi-structured interviews followed a schedule of topics based on Kilimo Source's expertise and insight (see Annex 1), using it as a guide to stimulate open conversation and encourage interviewees to bring up and explore issues that were important to them. Topics were drawn from research team discussions, the first 60 short interviews, the Literature Review, and the Ecosystem Study.⁸ The topics covered included details about how social media is used, how it contributes to livelihoods, what platforms are used and for what purposes, the experience of participating in or managing groups on social media, problems of trust and other issues like scams and con men, what strategies are used to cope with such challenges, how the experience of social media differs according to gender, and if any groups may be excluded from engaging with social media and why this might happen. These topics formed the basis for the initial manual coding of interviews, with additional codes and subcodes added as they arose from initial analysis.

Additional insights came from deeper conversations and further interviews during the filming of a documentary produced by Kilimo Source and filmed by Habitus Insight that featured a number of farmers from the original sample.

8 Caribou Digital and Learn.ink, *The Ecosystem of "Social Agriculture"*; Caribou Digital and Kilimo Source, *Social Agriculture: A Literature Review*.

4 Meet the interviewees: Dynamic “agripreneurs”

The 21 interviewees (see Annex 2) included a cross section of roles related to farming and a broad representation of ages, farming experience, and level of engagement with social media.

The gender split in the selection favored women, though the split was close to 50/50 (12 women and 9 men). This bias addressed the underrepresentation of women’s experiences, which is particularly important as the number of women involved in social agriculture is growing.

The age range of those interviewed spanned from early 20s to a woman in her late 60s. The sample included 13 classed as “youth” in their 20s, 5 classed as “mid-aged” in their 30s and 40s, and 3 older. This split probably does reflect the fact that the majority of those involved in social agriculture are in the younger age group; however, it is not just a youth-led phenomenon.

The interviewees include 15 farmers. Most were doing other work alongside farming, which interviewees said was typical for those with agricultural livelihoods.⁹ A few farmers were quite deeply engaged in social media, running Facebook and WhatsApp groups as administrators or moderators; several also worked as agronomists providing training and agricultural consultancy. Three had full-time jobs in other sectors: one as an engineer, one as a government service intern, and one in customer service. Three of the farmers’ agricultural work included rearing pigs, and one of these also kept some dairy cattle. The remaining interviewees had other agriculture-related roles, including:

- A veterinarian
- A retailer of perishable groceries, which he sources directly from farms and local markets and sells in Nairobi
- A female student who buys onions and potatoes from farmers she has access to via her uncle and then sells mostly in Nairobi
- A man whose business is tree planting
- A young woman who runs a small business designing and building urban vertical gardens to grow food

The great majority of interviewees have higher education qualifications, with just over half in aspects of agriculture at diploma or degree level, though there were a few with qualifications in other subjects, such as veterinary science and engineering. This level of educational qualification is not necessarily representative of Kenya’s farming population, but the sample is indicative of the background of agripreneurs. Several had held jobs in office or “white-collar” work before coming to farming.

9 For further information on this finding, see Mwaura, “The Side-Hustle: Diversified Livelihoods of Kenyan Educated Young Farmers” and Aloba Loison, “Rural Livelihood Diversification in Sub-Saharan Africa: A Literature Review.”

All interviewees except one had family backgrounds in agriculture, which is typical of most Kenyan families. Their parents and grandparents had been farmers, mostly relatively small-scale farmers producing food for subsistence with some surplus and cash crops to pay household expenses, including for their children’s education. For most, education was intended to take them away from farming and into other professions. As Thomas, an engineer and now also a farmer, explains:

“But growing up, I think there is this issue with African parents. Let me say African parents specifically in Kenya, whereby a parent is training you, not to be like her. For instance, my mom is in farming, but she used to work very hard to see me go through the school system to become maybe an engineer or to become a doctor. She never even sat down one day and told me that she is taking me to school to get more trained on how to become a good farmer. So it’s something that is kind of confusing to me right now ... so that’s how, if I found myself doing engineering, despite the fact that I love farming.”

But all interviewees who had worked elsewhere had returned to agriculture or closely related roles, which they were all passionate about.

Several participants referred to themselves as “agripreneurs,” a term that appears to be used quite widely in print and other media in Kenya. This term captures core characteristics of social agriculturalists: They are entrepreneurial, energetic, and dynamic. They are keen to innovate and pursue profitable forms of agriculture. Some are driven less by profit than the desire to practice agriculture in what they believe are holistic, organic, and other environmentally sustainable ways. There is no doubt that all are excited and passionate about what they do. Not only are they keen to try out new crops and forms of cultivation, but also they welcome the new contacts they are making via social media, at home and internationally. They are also actively engaged in learning on an ongoing basis.

Interviewees often described much of the agriculture being practiced around them by small-scale and subsistence farmers as limited and basically the same as the previous generation, broadly following an established pattern of crops and techniques of cultivation. In contrast, social agriculturalists seek to innovate. Techniques of cultivation include: permaculture, urban gardens, syntropic agroforestry/agriculture, and hydroponics, as well as more conventional agriculture using agro-chemical inputs. The range of crops cultivated includes (in no particular order): mangoes, strawberries, gooseberries, passion fruits, arrowroot, purple yam, watermelons, tomatoes, cucumber, capsicum, beans, onions, potatoes, maize, bananas, coffee, tea, avocados, macadamia nuts, asparagus, various medicinal herbs and flowers, earthworms, seedlings to sell to other farmers, and livestock (pigs, goats, chickens, and dairy cattle). While this list is not exhaustive, it shows that social agriculturalists are cultivating both “traditional” staple foods and branching out to experiment with many new crops.

Social agriculturalists see themselves as forming a new and growing community of farmers and related roles, a community that constitutes itself by communicating and sharing via social media, and sometimes face-to-face on the ground. Thus the term “agripreneurs” also captures their engagement with social media to pursue their individual strategies and goals.

5 Journeys into social agriculture: Variations in engagement with social media

Participants showed a broad spectrum of engagement with social media. Most often, they used social media simply to search for information. They also participate in online groups largely for this purpose. Others, because of their experience in farming, have more to contribute; some of these have diversified and deepened their social media activity. Then there are a few who run large groups on Facebook and/or WhatsApp for whom social media is a more significant part of their livelihood.

5.1 Thomas uses social media simply to support his farming.

Thomas, who is a pig farmer, describes how his experience using social media and engaging in farming came together. He comes from a farming background and has always loved farming, but his main job is as an engineer. During the COVID-19 pandemic his interest in farming and his use of social media came together:

"Okay. I've been in social media, especially Facebook for so long since I think 2010. So all along, I've been seeing guys who were discussing various types of farming, rearing various animals and also doing various crops. So I've been seeing these things, but I can say that I was not that interested in learning what people are doing or what was going on in farming up until when COVID started. That's when my farming passion or me going back to farm, that's when it just started. I remember travelling up country, back to my home area, and I found some of my classmates ... I found that they were doing farming, they were doing pig farming, and it was doing very well. And then due to the fact that I'm able to access information, especially via social media, I was able to talk to several people and also to interact with the other farmers in various farming groups. That's when I came to know more about pig farming, I came to know the best breeds to do in Kenya, and also the feeds ... So basically that's how we started. And with COVID-19 going on around the country, it was a bit difficult for me in the engineering business. So I find myself taking more and more time going back into my pig business and trying to improve things to make the farming much better ... So I went back to social media, especially Facebook, and that's where I met so many guys who are doing pigs, various breeds, in various parts of the country, and they really helped. So after that, I did the construction of the structures and brought my first pregnant sows."

5.2 Simon's story shows a deeper and more intentional engagement with social media.

Simon graduated with a diploma in agriculture in 2014 and then became a farm manager before beginning to work as an independent consultant agronomist. In 2019 he started his own farm alongside his consultancy work. At the same time Simon began to engage with social media, first with Facebook and WhatsApp, and then with Twitter and LinkedIn. He has joined many WhatsApp groups. He says his posts about his experiences in the field generated a lot of interest; his posts about farming attracted more people than any of his other posts, so he focused increasingly on agriculture. As he received more and more questions, Simon began to use YouTube rather than answer each question individually:

"... centralise them and put them in one room so that anybody who is interested can come in and get the information. So July 2021 ... I opened my YouTube channel and I've been able to upload more than a hundred videos, which is attracting so many people, so many people are liking whatever I'm doing, because this is the information that they were lacking ... I'm a bit better than other agronomists because I'm a farmer trying to solve or showcasing whatever they have been struggling with. So whenever they see a post or whenever they see a video of Simon in the farm, Simon trying to explain the challenges he's facing and the solution that he's coming up with ... this excites them and they get the first information, it's just like our offline training, they take it as an offline training."

Simon hopes this strategy will raise his profile further and so generate more business.



5.3 Beatrice has intentionally built a significant presence on social media.

Beatrice, who grows a range of crops such as tomatoes and watermelons, began farming before the impact of social media, but she now engages energetically and has a successful Facebook page, runs a seven-year-old WhatsApp group, and runs a Facebook group with over 67,000 members that adds around 50 new members each day. She is also active on LinkedIn and Twitter. In fact, she got a job with a seed development company from a post she made on LinkedIn. She says,

"So basically social media and farming, they are very related. You cannot escape. It's like when you're farming in the darkness, when you are not on social media, there are so many opportunities. You grow, you're able to sell without even going anywhere. So I would say it's a good opportunity for farmers."

As Beatrice puts it, *"I am on social media every hour."*

5.4 Nearly all participants have a positive view of social media.

Social media is a very significant support for their work, even if there are some negative aspects (see later sections). For most it is clearly indispensable: their livelihood is inextricably entwined with the use of social media. A couple of participants were less enthusiastic even though they too used social media to some extent, to advertise themselves and to generate work. Felicity said that she kept forgetting to post and to update her pages. She also felt that she did not have the time or inclination to try to learn all the tips and tricks needed to be more effective on social media. She also found that the need to provide a human face to her business presented her with challenges about separating her private and her professional identities. Luke, on the other hand, was quite skeptical of social media, believing that it was full of images and stories that were not true and reflected a corrupt and false "get rich quick" mentality that was damaging to society. He did use social media to advertise for work, but he felt most of his work came from referrals through networks of contacts.

5.5 Summary

There is a wide spectrum of engagement with social media. All interviewees were “social agriculturalists” in that they all used social media to support their livelihoods, but they did so to quite varying extents. Within “social agriculture,” many use social media to help develop their farming practices, but there are also a few for whom social media has become as absorbing and even as time-consuming as their other farming or consultancy activities.

Beginners like Thomas have found the information they can access has been crucial for guiding them in their early farming ventures. Some have moved further into the social media sphere, for example, by becoming administrators and/or moderators for Facebook and WhatsApp groups. They are also using social media to build their careers as trainers and consultants. Others, like Simon, have been aware of and engaged with social media for several years and are growing their agricultural and social media careers in tandem. Beatrice represents a minority. She came to social media after already farming for several years, but now the online engagement seems almost to be taking over as her main activity. Variation in level of engagement is related to a range of factors, including length of experience, background education and skills, and choice of business strategy.



6 Uses of social media

Social media is used for buying and selling. Another area of activity is participating in online groups. However, the main use, in terms of time spent, is accessing information.

6.1 Searching for information is one of the main activities on social media.

Participants described how “information” and “advice” are sought by farmers, especially but not exclusively by relative newcomers to the sector. They want to know about all aspects of farming, including: crops, techniques of cultivation, where to source equipment and inputs like fertilizers and pesticides, and where to market and sell their produce. Engagement around “information” is, therefore, a broad area of activity that naturally intersects with other areas of activity, such as marketing and the organization of groups on social media (on WhatsApp and Facebook), and the broader theme of a shared sense of community.

Interviewees did report that the basic search functionality of Meta (the company that owns Facebook and Instagram) was difficult to navigate and inefficient at times. However, they found great value in following different farmers on social media, such as YouTube channels with explainers on how to grow certain crops or how to treat different diseases and pests on the farm. Videos and posts like these have very busy comments sections that relate directly to the issue being discussed. Here the focus and quality of information is very high compared to searching for specific information via the search function available on the platforms.

6.1.1 Social media is a source of vital information for new agricultural ventures.

Social media makes information accessible to those starting out in farming, branching out into a new crop, or pursuing new opportunities.

John, who only started farming around two years ago with his business partner, says:

“I can say social media has been a great help to us. We used most of the information we get from social media, from the beginning from finding the market, finding the right seedlings, the varieties, finding out about diseases that majorly affect the production of capsicum. So I can say we have been using social media all along the way from production through to harvesting.”

Similarly, when Edward decided to switch from his office job to agriculture, he spent quite a while doing online research to find the kind of holistic and organic approach he wanted. He first found out about permaculture through YouTube. Through further research, mostly on Facebook, he discovered syntropic agroforestry, a land use management system in which trees or shrubs are grown around or among crops.¹⁰ He says he also conducted Google searches for relevant literature available online. He even paid \$350 for a training course, and a further course was partly sponsored by the Abundant Earth foundation.¹¹ Edward adds that membership in groups is very important for acquiring information and making himself available to teach and run training sessions on his own farm:

“Already [I am] in several WhatsApp groups that have several interests and you find that there is quite a lot of exchange that goes on in those groups. There are a lot of people who are much more knowledgeable than you. So you have to follow them. Once you get them on WhatsApp, you also have to maybe follow them on social media platforms, such as Facebook and even Instagram. And some of them even have websites. I’ve also used social media platforms as a learning tool. [Farmers] especially on Facebook, share a lot of information and you can even get some links there that can direct you to a site so you can continue adding to your knowledge. And also on WhatsApp there is that link WhatsApp business, which I have downloaded and I have put what I do into that. I do that a lot. And maybe when someone is given my number or wants to know now what I’m doing, from a different group, they can just get into that and see what is going on there.”

Martha, also a newcomer to farming, describes how she managed to track down arrowroot seedlings via contacts on Facebook:

“So I followed a conversation on arrowroots, someone who is doing them very nicely ... So I followed them and in the comment section, someone commented they know someone who is also doing them in Eldoret. So from there we linked up and then I got seedlings now from the person that they knew.”

Farmers learn about new opportunities for crops and training, for instance, on new methods of cultivation or managing farm finances. The contrast between those who use social media and those who do not is brought out clearly by Beth, who comments that she does not see any innovation on the neighboring farms where the farmers do not use social media; these farmers carry on with the agricultural practices of their parents and even grandparents.

¹⁰ See West, “Just What Is Syntropic Agroforestry?”

¹¹ See Abundant Earth Foundation.



Beth has a lot to say about this:

"I found out on social media that some farmers were going to be trained to grow asparagus. Without social media, I would never have known that's possible ... I wouldn't have had the thought of planting asparagus and being a small-scale farmer, asparagus and other higher value crops are really good for me ... So I get a lot of my own training through social media, and ... if I'm confronted by a disease, a crop disease, I quickly go to YouTube and I look into that and then I go back to Facebook and ask people questions ... So my life would have been way more difficult...and then I would have missed out on innovative things. Like I trained for hydroponics ... My fellow farmers who farm right next door, to me, they're not doing any of these innovative things because they probably don't have access to the internet. So when I look at their farms, I'm seeing the same old stuff ... So I can only say that social media has been wonderful. It's really wonderful. And I don't know whether it's because I'm a retired teacher, I am a real believer in lifelong learning ... Tomorrow I'm going to finish a finance class that I've been taking that's to help me better run my farm ... But there's also got to be that willingness to learn, because if you don't want to put in the hours, then you'll miss out on a lot of good stuff."

6.1.2 Access to information is helping farmers market their produce.

Relevant information is obviously closely related to marketing and selling and also enables planning for access to markets in the future. Section 6.2 focuses more specifically on how agriculturalists are using social media in other ways to market their goods and services.

The availability of information, often obtained from members of online groups, is important for farmers to sell their produce. In many cases farmers gather information posted by others. Simon, for example, has found information readily available on the price difference between selling watermelon on his farm and selling directly in the market in Nairobi, where he would get a better price. This will influence his future marketing plans.

In other cases, information is provided in response to inquiries made through groups, which is a common practice. John says about selling his crop of capsicum:

"One of them is this group called Kenol Farmers. So when we got into that group we were looking for our markets because at that time many farmers were doing capsicum farming. And so we had to look for a market a bit far away from our region. So when we go into that group, we would ask around the members, if they know any person that needs capsicum in large quantities. So that group did help us in finding a market because we were able to sell close to 80% of our products to a farmer who is located quite far away. So I can say, yes, we did get help from that group to find a market."

Two interviewees commented that the lack of information made planning and marketing more difficult. Stacey noted that it would be helpful if information about prices for different crops over time and across different regions could be easily accessible via social media. This would enable her to plan what to grow and when and where to sell. Mary reported that there is a serious lack of data about imports of fruit and vegetables into the Kenyan market. The lack of such data prevents farmers like her from identifying and planning to meet market opportunities.

6.1.3 It is important to check the quality of information on social media because not all of it is reliable.

This is true for farmers in general, but also for those who post or check posts going into groups: if they allow in poor information, that will lead to problems later. John goes to some lengths to check the information he gets:

"And you get your information most reliably from WhatsApp groups, but you also go onto Facebook and YouTube. You think that it's important to double-check the information you get online with friends and with other people in the business."

"So when it comes to, for instance, when it comes to Google most of the information that I, I usually go to PDFs or the projects that have been written by scholars by university or projects that ... because that information in that PDF file, I can trust them. I can trust that information compared to random sites that have been lived in by people that you are not sure of. So when it comes to Google information from journals, from podcasts, eh, those are the most of the sites that I really rely on when it comes to finding information."

Thomas also said it is always hard to trust information online. He explains that he has to check any information by doing further searches:

"I'm able to access the scholarly articles, documents on various sites, like Google Scholar and so on, and at least try to see whatever the information that was provided there. For example, if someone is providing ... the process of making certain feeds for their pigs, and they are claiming that these feeds usually allow their pigs to be delivered to the market place within a shortest period possible. And they make such a claim. I don't just take that information and start using it in my farm. So I have to take several steps, dig deeper, talk to experts in that area ..."

Thomas also points out that not all farmers are able to check information as well as he can:

"And that's where the problem comes in because it's not every farmer who is on social media with like, who is like me, or who is capable of doing what I do. There are others who will just take it ... And there are always repercussions to that. So that's why social media is as much as it's good, there are also those shortcomings. So someone must be very, very careful with the information that they get there and how they go about using it."

Stacey reported that quite a lot of information available both online and offline from people claiming to be agronomists is of poor quality. This situation led to efforts to set up an association of agronomists to ensure high-quality advice for clients.

Most interviewees said that if a solution is being sold via social media then they have to do "due diligence" by checking the profile, pages and posts, group memberships, referrals, and comments to validate the provider. Section 6.2 discusses how information can be partly validated by videos and photos of the real physical world; it helps validate information to see the person's face and what they are doing, in situ, on their farm.

6.1.4 Information is paid for in the form of training courses and consultancy visits, but also in one case the purchase of e-books.

Most examples of buying information are about paying for consultancy visits by agronomists, attending training sessions on farms, or other online and especially offline courses. Consultancy visits, training sessions, and sometimes courses are important sources of income for some agronomists and farmers. As discussed in section 6.1.1, Edward paid for a two-week course on permaculture. Martha and Beth have both paid to attend courses on avocado cultivation. They have also taken free courses on topics like leadership and finance sponsored by foundations, including the Young African Leaders Initiative (YALI), the Money Institute, and the Cherie Blair Foundation for Women and the African Women Agribusiness Network (AWAN).

When the research team visited Edward's farm, he was contributing as part of a small team delivering a three-day course on syntropic agriculture to a group of about a dozen farmers.

A similar example is provided by James, who delivered a course on cultivating asparagus, which was paid for by the 50 farmers who attended.

Farmers will also pay for experts, usually agronomists or farmers with an established reputation, to provide consultation visits to their farms. Interviewees included several consultant agronomists, such as Stacey, Beatrice, Simon, and James.

In relation to very successful farmers sharing their knowledge, Mary commented that some charge for “mentoring” but others do not:

“... mostly, they sell the information, in terms of consultation. They charge some consultation fee because they call it a mentorship program. They charge, if you get lucky, a few people will give you the information for free, but mostly they charge.”

Mary is the only person who said that she bought information in the form of publications:

“Yes. I have paid for online e-books, but they are not very expensive. I have bought a lot of information on tomato growing. ... It has been really beneficial because it tells me, it tells me a lot then if there are new farming practices, for example, I’m really keen on climate smart agriculture. So this is new information, which [you] can find in the e-book.”



6.1.5 The ready availability of information via social media has made farming much easier.

Thomas concludes:

"I feel that social media will play a huge role in ensuring that I get the right information. I get access to the best market, market prices, the best extension services and so on. So social media will really play a big role going forward and it's already doing so even now."

As mentioned in section 6.1.1, Beth commented with great enthusiasm about the benefits of social media for accessing information and the benefits of this for her farming.

6.2 Social media is used to market and sell produce and services.

Although agripreneurs may spend less time using social media for selling than searching for information, this does not mean that selling is a less important use of social media.

6.2.1 Beatrice describes the challenges of selling her produce before and after farmers began using social media.

Using social media has completely transformed how Beatrice sells and how she feels about selling. She describes how she used to take her produce to the local market:

"I have been in the physical market long before I even started being on social media. I used to take my tomatoes to the market. And I would say one of the biggest challenges that I was encountering at that time, because ... you go at 3:00 am, 4:00 am in the morning. So as a woman, you are already scared at 3:00 am at the market standing there waiting for your tomatoes to be sold. You are so scared, you are in the company of men. Eh, so it was a bit tricky for me ... So I would say physically, it's a bit draining and it's very tiresome and very scary ..."

She found that the men in the physical market intimidated her. They would not give her a good price for her produce, and she felt forced to sell at a low price. She describes being trapped because she could not take her produce to sell somewhere else; the buyers knew this and exploited it. Beatrice also used to sell to brokers, who cheated her:

"Then I came to brokers, brokers lied to me. They will not even pay my money. They will take your produce. And then you will not see them again. They have disappeared, you are left with no produce and no money. There is nothing."

She found her way onto social media and her experience was transformed:

"... online, it is an equal market. Nobody, you post things there, people put their price. You are able to see what price it is going at, what price this person is coming to collect with, what price these people are setting ... So you can decide on online, I'm going to sell it to this person or to this person or this other one ... Then when I started posting, posting online, like I'll post to my WhatsApp group something and they would see people and say, 'Oh, so and so can I have someone who can buy from you? What quantities do you have?' You even discussed quantities that you have, like that you show them samples online. You don't have to carry samples to go and show someone physically ... Basically online you just need a good camera, take nice pictures of your produce, and then post it to your people. So for online, it's a bit calmer, it's also faster for me ... I don't have to go anywhere. I've sold so many things online just without even leaving my house, it's very convenient."

Beatrice's account sets out the typical process for selling: posting about products online on a Facebook page or in Facebook and WhatsApp groups. Buyers then make contact and a sale is negotiated and agreed.

Susan's account of selling her pigs provides a similar trajectory. She explains that marketing used to be hard. There was only one slaughterhouse in her area, and that was the main market for pigs. She could sometimes sell piglets to local farmers for them to raise. Social media has changed everything:

"... when the social media changed, let me say, I can find market anywhere. I can sell to a person who is in, you know, away more counties, far away from where I am. Anywhere in the world, anywhere in Kenya."

6.2.2 Susan explains the difficulties of selling to brokers.

Susan initially sold her products (animal feed) to brokers without realizing who they were:

"You know, I didn't know the middle man, these people who standing between a buyer and seller, I didn't know. So I sold to them, you know ... So they sold it in a better price [to the final customer], a better deal than [mine]. And you see, it's my own product and someone stands in between you and the buyer and makes a better deal than you do. You are there, you are the primary person. So for me, that was a bad experience for me."

Susan now sells directly to her customers; like most interviewees, she has cut out the middleman. Social media brings the buyer and seller closer together.

Others use social media to set themselves up as middlemen. Florence, for example, distributes seeds and encourages farmers to cultivate exotic fruits. She then collects the fruit, like guavas and gooseberries, to sell to wholesalers. She says she is connecting the farmers to the market. Alice is also a middleman, buying onions and potatoes from farms and selling online in Nairobi. She is very successful and attributes this in part to paying higher prices than other brokers and selling at a lower price than the physical marketplace in Nairobi.

6.2.3 Online groups are very important sites for advertising produce and contacting potential buyers.

Members of groups will sometimes help other farmers by referring them to buyers. Interestingly, as well as posting on Facebook, Susan has created a WhatsApp group of all her previous customers. She says “*they buy from me, they buy from me frequently.*”

6.2.4 The use of images on social media, both photos and videos, is also an important way to attract buyers.

Stacey said agronomists sometimes post videos of their own farms or of their visits to clients’ farms as a way to build their reputations and so generate further training and consultancy work. As one put it: “*Seeing is believing, watching videos is almost like doing an offline farm training session.*” Martha is building a business as a YouTube content provider for consultants and other farmers who want to provide photographic evidence of their own farm’s progress to show potential clients their success. Similarly, farmers post photos and videos of the progress of their crops to cultivate buyers for their produce and their popular training workshops. Mary explained:

“... clients really love to see what you are doing, from preparing your land to planting, to doing all the maintenance practices. Because if you tell somebody your tomatoes are organic, they won’t believe it until they see how you’re doing it ... So I take a lot of videos and pictures as I am doing farming. Then I post on the platforms. Also when it comes to harvesting, when my tomatoes are ready to harvest ... My main market comes from people who viewed my content on social media. So they order, some order before harvesting, others after harvest.”

As noted in section 5, videos are central to Simon’s plans to build his brand and his career as a consultant. He has even started his own YouTube channel, where he posts videos about his own farm to show that his advice is authentic as it is based on his own hands-on work.

6.3 Participating in online groups is central to social agriculture.

Groups form a vital part of the experience of community in social agriculture. Participating in groups is a core activity that obviously intersects with both information sharing and with marketing. Groups are also used for the pursuit of individual business strategies. In some cases, however, they can be sites of negative and destructive behavior and arenas for competition for positions of power.

Groups are found on both Facebook and WhatsApp. They often start with a specific focus, such as tomatoes, onions, or dairy farming. Facebook includes many farming groups, some of which have memberships in the thousands or hundreds of thousands. Such groups are relatively open and visible to the public. On WhatsApp, groups are different. These closed groups have invitation-only membership restricted to 252 people. Such groups are often grown from a core group of contacts which gradually expands outwards as the network grows. WhatsApp groups may be partly localized with a regional membership. Given their closed nature, there is no way of knowing how many WhatsApp groups actually exist among farmers in Kenya.

6.3.1 Online groups are the main space where contacts are made, questions asked, information exchanged, and solutions offered.

These groups are clearly spaces where farmers find support, useful discussion, and information about core aspects of their livelihoods. As John says:

"So in that group [on WhatsApp called NARIP], we share more information. If you have a question you ask and we are about close to 200 members. So if you have any kind of information related to agriculture, there is always, you'll always find a person that has some info and that info will help all of us."

Beatrice provides an interesting account of starting her own group. After she started farming, she wanted to get information and ask questions, but her posts to Facebook groups were frequently refused. She decided to start her own group. She got advice from experienced friends about how to do so and eventually started her first WhatsApp group:

"... after we started that group, it was really active, it had the best brains, the best farmers ... Now people [have] started creating groups, creating groups, creating groups, but ours has stood the test of time, [it is] still active, including today. It's still very disciplined. You don't see people posting irrelevant things and there's a lot of help in that group. So ... people came to know me, Beatrice, the farmer who is online, and I've moved now to Facebook. And ... there are so many opportunities there actually."

6.3.2 Participants agree about what makes for a “good” group: discipline, restriction to relevant posts, and a lot of available help from group members.

Good groups have clear rules that are enforced by the administrators and moderators. For instance, in Beatrice’s group no forwarded posts are allowed, all posts must be direct to the group, and posts must be relevant to the focus on farming. Administrators must not allow people to deviate from the main focus. Interviewees reported that they had seen much evidence of negative and bullying behavior in some groups; several had experienced bullying themselves. Moderators of good groups combat this sort of behavior by deleting posts and blocking and eventually expelling those responsible. Most participants said good groups are also active, with the majority of members making regular contributions and ready to provide help. Luke complained that half the members of a WhatsApp group that he led did not contribute anything; the group was like a dead weight he was dragging around. A good group is an arena for active and valuable exchange of information.

6.3.3 “Good” groups sometimes spill over into offline meetings.

Beth, Stacey, and Thomas explained that the community dimension moves to another stage when online contacts actually meet on the ground and in some cases form friendships and collaborative links. Beth is chairwoman of a women-only WhatsApp group that organized regular meetings, both for information sharing and for “having fun,” as she put it. Some members are her friends, and they have gone on to arrange their own outings to visit farms and, again, to enjoy themselves. Stacey too reports that members of a group of tomato growers arranged physical meetings for socializing and enjoyment. Notably, both these cases are women’s groups.

6.3.4 In “bad” groups, administrators and moderators allow posts that wander off topic, and so introduce extraneous contributions.

In “bad” groups, administrators and moderators do not do enough to stop negative and bullying behavior; they fail to do their job of keeping things in line with the group’s aims. As Peter said, *“you don’t post a picture of a nude in a group for onions.”*

6.4 Summary

Social media is used extensively for accessing information to support social agricultural businesses. Searching for and sharing information was emphasized as very important by all interviewees. Information is also bought, mostly in the form of agronomist consultations and paid training sessions.

Interviewees also see participation in groups as a core element of the use of social media. Groups, therefore, are central to how social agriculture is organized as a community. They are core spaces for establishing networks of contacts and for sharing information and support.

The use of social media has transformed the way social agriculturalists buy and sell and market themselves—even though this is not without its challenges. For all the research participants, the uses of social media for selling and marketing, for participating in groups, and for accessing information show that these practices have become an essential and integral part of social agricultural livelihoods.



7 The importance and limits of community in the practices of social agriculture

This section explores the importance and the limits of “community” to the practice of social agriculture.

The discussion of the uses of social media above (section 6) touched on behaviors that are informed by a sense of community. This is most evident in the circulation of information and in participation in groups, where people come together to develop new contacts and networks and to provide advice and support. The circulation of information both reflects and constitutes community, but information is also used in more individualistic ways. The same is true for groups. They are an important support for community in social agriculture, but they too have less community-oriented aspects.

7.1 The circulation of information has strongly community-oriented aspects, but individuals also use information strategically to generate income for themselves.

Information is shared and farmers help each other. This builds a sense of community and enables farmers to join new networks of contacts. There are examples of online contacts leading to offline meetings of people for training sessions or for social get-togethers. There are also examples of farmers following up online contacts with farm visits and becoming friends with these new contacts.

7.1.1 Information and advice is often freely given to help others find solutions to all sorts of questions or to introduce innovations.

For Beth, the idea of supporting the wider community of farmers informs much of her work. Beth’s approach is widely shared by the interviewees, though she is more active than most in support of collaboration. She describes how all the members of the all-women WhatsApp group she belongs to managed to get free training in rearing free-range poultry from a supportive farmer: *“And he was bringing it for free ... we didn’t pay a single cent and that was wonderful.”* More generally, she says: *“Or if I find something that’s really successful, share it with a whole load of people so that we can all be successful together.”* In her view, supporting farmers is essential for the whole country, as *“farmers really are the ones who carry this country on their shoulders.”*

Similarly, John said, *“so if you have any kind of information related to agriculture ... you’ll always find a person that has some info and that info will help all of us.”* Mary says that since she is quite familiar with several social media platforms, she has found herself helping others: *“I have helped some people use social media to get clients and market, and market their products ...”*

7.1.2 Those who receive information in turn become information providers.

Some who have been helped by other farmers to innovate are now in turn helping others. Catherine describes how James helped her start cultivating asparagus. Now, she helps others too:

“... if they are interested in the plant, they want to plant these things, they’ll even ask for videos on how to go about it. And I’m generous enough to help.”

Catherine uses social media to share her expertise with others:

“I keep in touch, like I have the number on my contact list, so we communicate. Yeah. That’s through WhatsApp or even sometimes through Facebook, someone can ask on challenges that they might be expecting or challenges that they are facing and I can even call, or they can call to find out the solution, if any.”

7.1.3 In a group, some degree of reciprocity in the circulation of information is important.

Susan calls for a fair exchange of information in groups; otherwise, she feels that she is always giving and not receiving in return. Nevertheless, she adds that she does share information, particularly with people from her own part of the country:

“... yes, I do share information regarding maybe for those, for the group that comes from the area I do come from. Maybe I will refer them to the best doctor that treats my pigs. So I share [with] them, I would share that or tell them to, you know, I’ll recommend them to the best products to try them out, all that.”

7.1.4 Information is also used for business purposes.

Information is also bought and sold, as noted in section 6.1.3, and it is used strategically. There may be some flexibility on the part of experts and agronomists. For example, Stacey commented that sometimes consultants will not charge or will adjust their fee to the means of the clients. This suggests that some element of “community” may inform some of these transactions. However, transactions of information are also part of individuals’ strategies to generate income and build their reputation. As Stacey explained, sometimes apparently “free” provision of information by agronomists—for example, contributing answers to a question being discussed in a Facebook group—is actually a strategy intended to build their reputation and bring in further consultancy work.

7.1.5 Individuals collect and deploy information in pursuit of their own business strategies.

For example, Stacey, Simon, and Catherine research data on price fluctuations to inform strategy for marketing and selling crops. This sort of information is not shared as part of the “community” of social agriculturalists but is kept for each individuals’ own purposes. James described another strategy to seek to develop a reputation as an expert on the cultivation of high-value crops by readily giving good advice and using this to generate income delivering training—even eventually hopefully becoming a broker for such crops.

Interestingly, individuals pursuing their own strategies can have the cumulative effect of over-supplying the market. This is illustrated by an anecdote which came up in three of the interviews: a social media post about quail egg profitability caused so many people to start producing quail eggs that the market became flooded, and eventually many people made losses. This shows how the disconnected physical world can be quickly connected to the online world.



7.2 Groups are collaborative spaces also used by individuals for their own business purposes.

Participating in groups is very important for creating and maintaining a wider sense of shared community in social agriculture. Respondents talk positively about the support they have received from other farmers linked through networks on social media. They also refer to themselves helping others to succeed. Individuals' actions enabling the sharing of information through groups is a core aspect of the experience of community. Indeed, in some cases the "social" nature of online contacts lead to offline encounters between farmers, carrying out transactions with each other "on the ground" or gathering together for meetings.

7.2.1 At the same time, however, groups can be used by organizers to pursue their own individual goals.

Individuals invest their time directly in social media platforms, building new groups and taking on leadership roles as administrators and moderators of groups. Among interviewees, six run WhatsApp groups; of these, three also run Facebook groups.

The formation of a group can be part of an individual's business strategy. For instance, James is trying to build an Association of Kenyan Asparagus Growers as a way of maintaining quality and also eventually leveraging access to wider markets, including export markets. Beatrice explains that it has taken her several years and a lot of work to build her group from a WhatsApp group into a large, flourishing Facebook group with tens of thousands of members. She had help from a small group of expert mentors who advised her on how to name the group, strategy, and how to manage and control the group. As she puts it, she is now known as "*the farmer who is online*." Establishing the group has helped build her strong reputation, and this in turn generates a lot of business. Similarly, Jane says of the Facebook group she runs, "*Okay. I'm doing it cause, so that I can reach more farmers,*" and so boost her consultancy business. Administrators of large successful groups also generate income from companies that want endorsement from the administrator and access to post and promote their products in the group.

There are struggles over leadership within large Facebook groups. For example, three participants described how they themselves had been ousted as administrators and moderators from a very large Kenya-wide group by a new leader and his new team of close supporters. It is evident that in large groups there can be competition for control and the access leaders believe it will give to generate income. In this sense, groups can become an arena of competition for power and control.

7.2.3 There are some very negative types of behavior on social media that undermine the idea of social agriculture as a community-oriented and collaborative space.

All interviewees mentioned there is a lot of negative communication on social media, not just criticism but in many cases outright bullying. It is not at all easy to understand, but all see it as very destructive. There is also a major problem of lack of trust, which hinders transactions on social media, which is closely related to the widespread presence of “jokers” and scammers. Scammers especially are con men who are trying to cheat and steal. Finally, there is significant gender-based discrimination against women in some social agricultural groups. These problems are discussed further in section 9.

7.3 Summary

The uses of social media for participating in groups and for accessing information reflect and sustain a sense of community. At the same time, information is also gathered and used by individuals in pursuit of their own goals, and this information is not shared. Running groups is another strategy for individuals to build reputation and income. Large groups can become sites of struggle for control. Within the social agriculture community, however, there are some negative behaviors. There is widespread bullying, and women in particular are subject to harassment and discrimination.

8 Social media platforms and how they are used

8.1 The most popular and most-used platforms are Facebook, WhatsApp, and YouTube.

8.1.1 Most (but not all) participants listed Facebook as their number one site.

As Stacey says, Facebook's primacy is almost culturally embedded in one's introduction to the internet; the first account people have will be on Facebook. Facebook is widely used for posting on the timeline of groups or individual profiles and for commenting on posts. It is also a place to seek information and advice. Beth says, *"I use it all the way across the board,"* for information about growing, diseases, prices and marketing, and finding clients.

In a less positive light, all participants stated that there are major verification problems on Facebook. Information can be unreliable. Often users just do not know who they are dealing with. Jokers and scammers often use the inbox to make contact. In addition, women participants receive unwanted images and messages of a sexual nature via the inbox. These are some of the reasons why interviewees repeatedly mentioned using Facebook in conjunction with WhatsApp. Most platforms can be used in an interlinked way, but Facebook and WhatsApp are the two most frequently linked.

Felicity and her business partner know they need more creative routes to market, to grow their business making urban food gardens. Felicity knows what she needs to do but has not yet achieved the level of ability she aspires to with handling social media. According to her, social media platforms do not seem to provide an easy and open route to present her product to the market and generate clients. In particular, she feels that Facebook should provide access to training in how to use the site most effectively, to *"tips and tricks,"* as she puts it. At present, Felicity promotes her business through her Facebook page. She is also on Instagram and has a website.

8.1.2 WhatsApp is the second most-used platform.

One or two interviewees reported that WhatsApp is their first choice among platforms. WhatsApp differs significantly from Facebook: it is used for phone calls and video calls between contacts, sending messages with links to information or videos, and so on. WhatsApp offers the ability to compress data so video calls are easy; this is not widely done via Facebook. Another popular and very important use is for participating in groups. These are limited in size (up to 252 members), but they are closed and invisible to those outside it, unlike most of Facebook.

8.1.3 Facebook and WhatsApp are the two social media platforms that are most closely linked by user practices.

Most interviewees explained that they bring contacts from Facebook to WhatsApp; only then do they get down to making a deal.

Catherine, for example, says:

"My main market is online. If I'm not on Facebook, I'm losing it and I'm missing out. So I have to post something on either my timeline or on my page for people to know that Catherine is selling this at this particular time. That way I'll get referrals. I even get people who just get my number and they ask about asparagus or they ask about the artichokes or the purple-fleshed sweet potato. And once one gets my number I add them on my contact list. Then on my WhatsApp, we communicate from there."

Similarly, Susan explains that she brings potential clients from Facebook to her WhatsApp in order to get "closer" and to check they are genuine:

"... you know, from that general thing [Facebook] to WhatsApp, you know, bringing you close. As one, you must be using your real account, your real name, your real contacts. That's how somehow I can trust him. Then I will bring you closer. And then I see the kind of the person you are, by using your real name, your real addresses, your real contacts ... it gives me a way ... to assess you again, if you are really in ..."

Jane follows the same process:

"When you have found clients on Facebook and then you negotiate further and then they get your contact. You go to WhatsApp, you send pictures or videos of the produce. And then from there, you, maybe you can make arrangements on when you can meet or the client can come visit your farm so that you can maybe have an arrangement on supply per week, if it's weekly or monthly, or you have to maybe send a sample, a physical sample to the clients."

Most of the research participants followed the same process. Business account pages on Facebook, like Felicity's, have a direct link to WhatsApp. Most said they don't want to do business through their inbox; it is too "open" and often full of unwanted communications. In fact, Mary explained that she has two accounts for all the platforms she uses: a personal account and a business account. She says *"my number one is WhatsApp and I use Facebook, there's Instagram and YouTube and then Twitter."*

Farmers are continuously building their networks by verifying people who bring value to their livelihood through adding them as a WhatsApp contact. This process often begins in a more chaotic open space and involves a phone call to verify identity and weed out time-wasters. This is important because these networks are not visible; they are individual contacts that surround each social agriculturalist who will ultimately be engaged at some point in the farming cycle. Some will even be invited into private WhatsApp groups. WhatsApp is considered a secure and intimate space for progressing professional relationships.

8.1.4 The WhatsApp “status” function is used by several participants to send out updates to their contacts.

Peter uses the status function to reach all his customers and regularly advertise what he has on offer in his online fruit and vegetable business. He feels that it would be very useful for him if his status posts could stay live for more than 24 hours, perhaps for several days or a week. Peter used to use his personal Facebook page to promote his business, but the diary of contacts on his WhatsApp status is more useful. He also sets up advertisements on Facebook and Instagram. He has two phones and uses a business account on WhatsApp, but doesn't have a Facebook business account.

8.1.5 YouTube is often featured in the top three most-used platforms.

Participants use YouTube extensively for learning, often finding videos that explain how to cultivate different crops or how to treat pests and diseases. It is also used for teaching, so consultants will find that they can build new business from viewers who have come to their channel on YouTube. Simon, for example, invests quite a lot of time and resources into building his YouTube channel. Currently, he has over 3,000 subscribers. Simon felt that a particular training course showed him how to succeed by being very authentic and telling his own story in his own words. This makes his videos accessible and captivating. It is fairly early in his journey, but he is steadily building his brand and generating a regular flow of consultancies. Simon says, “*I use Facebook, TikTok, Twitter to post my videos and send people to my YouTube channel.*” Martha also works with YouTube, helping build content for clients who want to showcase their farms and their crops.

8.2 Other platforms include Instagram, Twitter, LinkedIn, TikTok, and Telegram.

8.2.1 Several participants use Instagram, which seems to be growing in popularity, though it is still at a relatively low level for social agriculture.

Felicity describes Instagram as “... where you just display, it’s like an online catalogue.” Jane says:

“... mostly on Instagram I post for farmers, but not so many farmers are on Instagram. I don’t have a large following on Instagram too [but] ... some clients they’re on Instagram, not on Facebook ... especially the shops and the supermarkets.”

Instagram is appreciated for the quality of images. For instance, Beth is very positive about it as a marketing tool, although she hasn’t yet begun to use it for that herself:

“What I like about Instagram is ... the images ... if you take really good professional pictures of something, whether it’s yourself or you have somebody else do it for you I think they will attract whatever you’re looking for in the market. You know, whether you want customers or whether you want some kind of attention to do with whatever you’re doing ... in these other social media, you can take photographs, but they don’t quite have the same effect as Instagram. I’ve seen a lot on Instagram that makes me gravitate towards something and I bought stuff because of seeing it on Instagram.”

Only Alice uses Instagram as the main platform for her buying and selling business. This also seemed unusual, as others see the platform as mainly used by younger folk who are interested in things like lifestyle, fashion, and music. Yet Alice has successfully used it to contact customers, especially women, for the onions and potatoes she sells. These customers are mainly in Nairobi and are often shopkeepers or market stall holders. At other times of the year, she also uses Instagram to sell shoes and clothes. Alice pays KES 200 (US \$1.68) a day to send her ads out to additional people, so she pays to “boost” her posts. It seems that her use of Instagram is very entrepreneurial and sophisticated. Her single-minded investment in Instagram is related to her considerable dislike of Facebook (see section 10). She will not use Facebook, since she had such bad experiences on it a few years ago.

The idea that Instagram is not really used for farming and that it is mainly used by the younger generation is echoed by Catherine:

“Facebook accommodates everybody, unlike Instagram, that has a majority of the young generation, the younger generation, and the younger generation is not interested in farming. Most of what you can sell on Instagram are clothes, shoes, drinks, food and such. But for farming, Facebook is the way to go, Facebook and WhatsApp, I think I’m okay, I’m good with them.”

8.2.2 Twitter seems to be less used, but this may be changing.

Beatrice mentioned using Twitter Spaces to run discussion sessions online. Twitter Spaces is a new functionality on Twitter where people with a specific topic or focus can hold forums run by a moderator. This feature is connecting farmers across the continent and even further afield. Most discussions are in English, so language will be a limiting factor for broader topics. However, regional and national discussions are taking place on Twitter. For example, Beatrice ran one on conservation agriculture.

8.2.3 LinkedIn is seen as mainly for “professionals” and company directors.

Two interviewees described using their quite extensive list of contacts to market themselves. Jane, for example, claimed to have around 3,000 contacts on LinkedIn. Beatrice got a job with a seed development company through a comment of hers on LinkedIn. Notably, both Jane and Beatrice had worked for agricultural companies and so may be more familiar with the platform. Jane says:

“Mostly I get referrals because maybe when you post produce and most of my connections are in the agricultural industry. So maybe if I post, I get comments or inboxes ... You can talk ... And then the other thing is some, some clients are LinkedIn too so you get the connection there.”

Felicity echoes the view of LinkedIn as a space for “professionals”:

“I’ve just gotten into LinkedIn that brings up professional space. So far I’m liking how it’s linking me with professionals, because it’s mainly a professional field, but I can’t really comment so much on it because I haven’t had so much time to explore it. Yeah.”

8.2.4 TikTok seems to be little used.

Simon and Martha use TikTok to direct people to their YouTube channels. Felicity mentions it as a “fun” platform where people can gain fame.

8.2.5 A few participants mentioned Telegram, but none seem to use it.

Stacey notes that WhatsApp groups may be migrating to Telegram, because its group size is much larger, up to 200,000 members. This is one of the developments that needs further research.

8.2.6 There seems to be a gradual diversification of platforms.

Participants are aware of a wide range of platforms, even if they do not use them all at this stage. It appears, however, that some are beginning to engage across platforms other than Facebook and WhatsApp, becoming active on platforms like YouTube, Instagram, Twitter, and LinkedIn.

8.3 Mobile money services like M-Pesa have a huge role in social agriculture.

The great majority of transactions end up using M-Pesa to make payments. Interviewees expressed some reservations about this mobile money transfer service, as there were some cases where payments had been reversed and the relevant telephone number turned off, with the result that the seller lost money. However, the great majority were happy with this service, especially as several had “till numbers,” accounts for which transferred money could not be reversed without the recipient account holder’s agreement. A mobile phone number is required for transactions on M-Pesa; this is another reason for linking between platforms to complete a transaction, because users wish to verify clients’ identity through phone calls, specifically communications via WhatsApp (see section 8.1.3).

8.4 The effective use of social media for supporting and promoting farming and related businesses requires a fair amount of learning.

Participants seem to learn how to use platforms like Facebook through trial and error and guidance from friends. Mary mentioned the availability of advice from experts, who often charge a fee for sharing their knowledge. There is clearly a lot of learning going on, especially if people diversify the platforms they use. Felicity also referred to the need for better access to learning how the various platforms work and wanted access to “tips and tricks” to use them most effectively.

8.5 Summary

Facebook and WhatsApp are the two most-used platforms, and they are often used in linked ways. Other platforms are linked by users. For example, some use TikTok, Twitter, and Facebook to direct people to their YouTube channel. Felicity says:

“Facebook is actually one of our main routes, but all of them [social media platforms] definitely, they are all intertwined in helping you gain more clients.”

9 Problems and countermeasures on social media: Scammers, trust, bullying, and harassment

9.1 Con men and scammers are a major problem on social media.

All interviewees commented on the presence of con men and scammers. They gave various examples of scams, such as people sending money to pay for goods that never arrived, or investing money in agricultural projects that turned out to be nonexistent. The pervasive presence of these con men means that everyone transacting via social media finds it very hard to know who to trust. The majority of participants had suffered some form of loss from scams early in their career. This early experience taught them to be much more careful in the future.



Not all such losses involved agriculture; one person recounted how they had lost money paying for a new phone that never arrived. Another recounted that they had suffered some losses due to “time wasters,” in this case a “disappearing buyer.” When they tried to deliver two tons of onions, the buyer was nowhere to be found. As a result, they had to sell their onions elsewhere at a much cheaper price. The problem of the “disappearing buyer” was reported by a few interviewees, but there is no clear explanation for the motivation of such “time wasters.”

Susan describes an early mistake of a different kind when she first sold some of her special animal feeds online. She discovered that she had in fact sold to a broker, who went on to charge a higher price to his clients. She has stopped doing this and now tries only to sell directly to farmers.

9.1.1 As a countermeasure, a Facebook group was started called “Buyer Beware.”

In the “Buyer Beware” Facebook group, users identify con men and publicly shame them using materials like screenshots as evidence. This group has been very effective and has even involved action by the police. People trusted the group, and they would share their true stories with the administrators. Stacey explained that unfortunately scammers fought back by opening a fake group. They opened a buyer beware group with the same logos and used pseudo accounts (using names of the administrators of the real group), so that new people would join the group thinking it is the original group. Not knowing it is the fake group, they are already conned.

9.1.2 To counter the problem of con men, interviewees carry out checks or “due diligence” on anyone unknown to them.

Checks include looking at a person’s profile, as frequently con men do not have photos or other relevant details on their profile, and checking their online activities by looking at their posts or comments, or even their contributions in groups. Membership in too many groups can be a sign of a scammer. Referrals and comments about them are also important. For instance, Jane says:

“In WhatsApp groups farmers know each other and the majority of the farmers know each other. So they will say don’t sell to that person, not unless he maybe pays first, or that is a good person ... you get recommendations from farmers regarding the client.”

The next step is to exchange phone contacts and actually talk. Several participants say that talking will soon reveal who is genuine and who is not. Anna explains that con men will keep making excuses about not being able to pay a deposit, such as there is a problem with their account or they will pay the next day and so on, so that she can soon tell that they are con men.

It is very important to test if people are really who they say they are. People also use their locations as a way to check and validate their identity. Contacts will struggle if they are not willing to geolocate themselves, usually by providing details via WhatsApp including photographs of themselves on their farm or in their business. If they cannot validate their identity, they will get left on Facebook and may even be called out on Facebook.



9.2 A pervasive lack of trust makes buying and selling difficult.

There are various strategies to establish a seller as genuine. Several farmers said it is important to provide photos or videos of their farm and their produce, with themselves included in the images. Similarly, a profile on social media should contain sufficient details to help establish one's credentials. Providing rapid responses accurately and efficiently is important. Of course, positive comments and referrals from previous customers are also helpful. Susan enrolls all her clients in a WhatsApp group and receives further orders and referrals that way. Farm visits can also be important; James says *"don't trust anyone with your money or with information without first getting to their farm."* Others said that sometimes they could verify that a potential client was, for instance, a farmer by getting delivery drivers from their locality or friends of friends to report back about them.

A frequent strategy is to ask for advance payment of half the price with the remainder paid on delivery. For the provision of training sessions, it is important to collect fees at the start, otherwise attendees can drift off without paying, promising to pay soon. For certain transactions, after talking by phone, arrangements are made to meet somewhere, sometimes for clients to come to the farm to collect the produce themselves and pay at the time. A participant mentioned the example of a seller who has such positive feedback that buyers will often pay the full cost up front, but this is rare. Florence describes an example of a woman on the Digital Farmers Kenya Facebook group who acts as a kind of escrow account and holds funds until a transaction is satisfactorily completed, taking a commission for her services. Florence says she has encouraged her to start a platform *"where she can actually do it, like from an e-commerce platform."*

9.3 All participants report bullying is common on social media.

Bullying affects both men and women. Thomas, for example, describes how he was strongly criticized by several people when he sought advice for his pigs that were sick. He said that the negative comments were really severe:

“There is nothing worse than when you are suffering. You’re really suffering down there. And then someone instead of coming to assist ... they’re out there sacrificing you, saying all the bad things to you.”

In the end, he got help from others in the group and found a veterinarian who could cure his animals. Thomas, like all interviewees, felt that more has to be done to block this kind of negative behavior.

9.3.1 Women are subject to the worst forms of bullying and harassment.

People who send unsolicited messages can be blocked, but Martha describes how some of these will reappear under pseudo accounts, which can make her feel quite uneasy. This is explained further in section 10; however, it is worth noting here that as a result of negative experiences on social media some women tend to avoid posting or commenting, preferring to direct message or use WhatsApp so that their communications are more private. One of the strategies against the negative treatment of women is to build women-only WhatsApp groups as safe spaces for them to interact. There are far fewer women than men who participate in social agriculture, and online harassment and negativity is certainly one reason for this. There are also examples of strong women who are not put off by such negativity. Beatrice is very active on social media and says her experience has made her *“a tough nut to crack.”*

9.4 Summary

The widespread activities of con men lead to a major lack of trust on social media. People have learned ways of doing “due diligence” to check and avoid scammers. Bullying is a frequently reported problem, as are harassment and discrimination against women. Women may limit their interactions to private messaging on WhatsApp and sometimes by joining women-only WhatsApp groups.

10 Gender perspectives

Gender plays a critical role in how both women and men navigate online space and social media platforms. Participants held differing opinions about how gender affects using social media for agriculture, although a key trend was that many women faced gender-based sexual harassment. This has been central to how these women use the platforms, adopting methods to avoid unsolicited messages or images. Additionally, women face further negative judgement on social media, particularly when engaging with agriculture.



10.1 The key gender issue that emerged from interviews was unsolicited messaging.

Many of the female participants recall situations where they had received unwanted messages from men, particularly through Facebook Messenger. Jane felt that people were “well behaved” on WhatsApp, as they knew each other; however, on Facebook strangers send “funny messages,” including nude images. Mary had also experienced this, saying:

“You find on Facebook you’ve posted things to do with agriculture, then someone comes to your DM [direct messaging inbox], instead posting things like nudes there, you are like, it is not even related [and] without your consent.”



Felicity also noted that Facebook Messenger was where she received most unsolicited messages. However, since making a new account this has reduced. The most extreme case happened to Alice: harassment ultimately drove her off of Facebook. She received both “irritating images” and messages:

“Yeah. So, and some people will just come like, ‘you’re so young, you can marry me, stop doing these’, like a lot of jokes. They see women. ‘And if you’re looking for money, I can help you with other ways other than you selling what you’re selling, I can give you quick cash’. So there’s that entitlement of, if I give you money, stop doing what you’re doing, I can take care of you. A lot of. Yeah.”

These sorts of comments lead her to leave Facebook after high school, although she does note that it may have improved since then.

10.2 Women also reported that men are unsupportive of women in farming.

There appears to be a perception that women should not be in agriculture, and many of the participants have found they are unwelcome in these spaces. Alice has felt she isn't always taken seriously, with her work being "diminish[ed]":

"Being as a woman online is sometimes hard, because people tend to diminish you and they're like, no, you cannot do this, this, the work that is done by man, you cannot succeed. You're still at school. Like most people don't take women seriously. Especially at my age in Kenya. They're like, you're so young to do this."

Jane experienced similar discouragement, explaining that men often tell her she should have a different occupation. She alluded to the idea that this was a societal belief, stating:

"I think because here in the community that I come from farming is mainly for men ... women are just supposed to be housewives and take care of the kids compared to men who are supposed, maybe to work and do some hard manual jobs."

She did, however, suggest women in farming are very supportive of each other. Alice also found this, suggesting female buyers often support female sellers and farmers.

10.3 Among the male participants, there were a variety of different beliefs about women in agriculture.

A couple of the men felt that women have it easy, having more job and funding opportunities. Edward in particular felt that traditional gender roles had been reversed, with women providing due to increasing job opportunities:

"And on the other hand, you see the society that you are in concentrates more on, on women rather than men. And you see that even, even in working places, women nowadays get a lot of, a lot of employment [more] easily than men. And you find that this really has affected the male gender because you see the [inaudible] is unbalanced. Because you see coming from an African perspective, the man in the past was supposed to provide. And the man has to provide in the sense that this man gets to find, to find a work, get to work. And at the end of the day, bring something home. Now it's like the roles have reversed. The men, the men are the one who are being, who are being fed by the women. So unless now we men start thinking outside the box, yeah. Things will not be much easier because every society now is concentrating much more women. There is even a lot of funding that is [put] into women's matters, but not that much of that is that is concentrating much on the men."

The idea that women were now competing with—and in some cases doing better than—men is another example of the kinds of negative perceptions of women that many women interviewees reported, as mentioned above. Other participants had a more positive outlook on the work being done by women within agriculture. For example, Simon said he felt inspired by women, due to their subversion of the societal pressures that Edward alluded to:

“There is nothing that impresses me like seeing a lady because it is, it’s a sign of independence. It’s a sign of strength because you know, agriculture is known like it’s more of a, it’s more of a physical job. They tend to think it’s more of a physical job. And sometimes you may be involved a lot physically into farming. And every time I see a lady like ‘farmer on fire’, like my sister, kids and others in farming, this usually impresses me a lot.”

Thomas noted that women are subject to far more scrutiny on social media, facing more backlash than men:

“So even on social media, a man will make a certain comment and it is taken lightly. If the same comment is made by a lady, all hell is open for her all. All hell fire is open for her. So I find it quite unfair. It’s a very unfair ground, the social media, it’s very unfair ground when it comes to gender and females are really finding it hard to survive there, they have to be very careful with what they say.”

Conversely, Anna felt she had not had any negative experiences due to her gender and that men and women are equally subject to negativity on social media.

10.4 Summary

There seems to be a trend in women’s gendered experiences on social media, with many of the female participants facing some form of harassment and discrimination. Unsolicited messaging and sexual harassment are widely reported. Women also face negative attitudes when engaging in agriculture. In many cases, male perceptions are that women should not be in agriculture, at least not publicly in their own right as farmers or in other agriculture-related roles.

11 Factors leading to exclusion

The issues around exclusion are covered in less depth than other topics. Interviewees touched on these issues, but there was insufficient time available to develop the conversations and explore such complex matters.

Few interviewees raised the topic of finances; of the few who did, none went into any detail about their own situations. In relation to reasons for exclusion from social agriculture, participants' comments were sometimes quite brief. The points they raised are summarized here. The factors associated with exclusion are evidently of considerable importance, but more effective coverage would have required more time and would be better addressed as a separate, dedicated research project.

11.1 Financial issues

11.1.1 Lack of funds limits access to social media.

Farmers engaging in social agriculture obviously have to purchase smartphones, but this expense is just the start. Interviewees often complained about the cost of buying data, and two complained about the cost of advertising on platforms. The cost of buying “bundles” adds up, and this is an essential expenditure. Everyone recognized that the cost of the phone plus the data is a problem for poor farmers and so forms a barrier preventing them from accessing social media and the opportunities it provides.

11.1.2 Lack of credit for investment limits participation in farming.

Capital is very hard to find, though it is crucial, especially for investing in the development of farm enterprises at key early stages. A couple farmers mentioned having to borrow funds from family and friends, as well as borrowing land to start up their ventures. John and his business partner have managed to get some funding through a World Bank and Kenyan Government-funded NGO called National Agriculture and Rural Inclusive Project. Mary mentioned that she is part of a WhatsApp group where members support each other by providing testimonials for loan applications to banks that collaborate with the group.

Beth explained that access to credit is particularly difficult for women, often because title deeds to land that can be used as security for loans are generally in men's names. It seems that local and national sources of finance for investment are somewhat limited, and funding is hard to find.

11.2 Wider problems of poverty lead to exclusion.

Lack of education due to poverty was identified as a problem. This is linked to illiteracy and ignorance, both preventing access to the internet and social media. Thomas says:

“... and also, so to say the illiterate—those people have not been able to go through the Kenyan system of education. You see, the reason why we go to school, according to me is not just to get the engineering skills, like the ones that I got. You’re able to get, like a communication skills, interaction skills, research skills, and so on. So those people like the ones who have not been able to go to through the system, the educational system, those guys are not able to maybe access information.”

He also sees exclusion as due to ignorance:

“Others are due to ignorance. They don’t even know about social media.”

Lack of education is also related to lack of proficiency in English, which is the main language used on much of social media, again leading to exclusion.



11.3 The elderly and the rural “village” are associated with exclusion.

Several interviewees believed that the elderly, sometimes identified as those over 50 or sometimes 60, were excluded because they did not know how to use smartphones. Another thought that the elderly were reluctant to change and adopt new technology. Edward said:

“Those people who are excluded from such online opportunities are the older generation, because most of them don’t know how to use the smart phones, which are a bit tricky, according to the age of the user. Because you also find that you might get an older person with a smartphone, yet they don’t know how to, to login into some, into some applications in the phone. Most of them actually, they simply know how to dial, make calls and receive calls, only that, nothing else. So the older generation is the one that has been mostly affected.”

Florence linked the idea of rurality to the non-use of social media among the elderly. She emphasized that it was an aspect of life in “the villages,” implicitly places far away from modern urban environments. Moreover, she described “youth” in “the villages” as uninterested in farming. These ideas are all expressed when she says:

“I think most of the time it’s like I told you, people in the villages, people are not, not yet using social media, you know, the village, the villages, most people in the villages and more particularly people who are 50 and above in the villages cannot even use social media. The youth are there, but they’re not farming. They’re not on farming platforms.”

Florence also linked these ideas in another comment about older people, or “the old school” as she calls them, including herself in this group. She paints a picture of the rural “village” where the older people do not know how to use smartphones for selling farming produce; while they are interested in learning, they cannot rely on help from their sons because the young are not interested in agriculture:

“I met two people the other day. I was telling them you need to be social media so I had to open a Facebook page for them. I showed them where they should be posting their things when they have some products to sell. So I actually have been doing this. So they’re about 60, but then you could see they are wanting to learn. But I think also the interest was not there initially, but I think the other day, she was telling me she wants to post, so I said just go here, click here, click it. She says she’ll tell her son to do it for me, but the son has no interest in agriculture. So there’s that limitation. I should just say people at a certain age, you know, the old school we call them the old school. My age group would be good. We’re more based in the rural areas and are having a challenge.”

Anna, however, thinks older people simply do not believe in social media:

"I think the old generation doesn't believe in Facebook. Yeah. Facebook and selling some produce using Facebook is done by people 40 years and below. Old farmers do not believe in Facebook, but for fun I think they use it."

11.4 Negative views of social media may also limit participation.

Luke did not like social media at all, though he did use it to get business for his tree-planting business. He saw social media as full of lies and a corrupting "get rich quick" mentality that damaged society. Beatrice reported a similar viewpoint, explaining that some people reject social media:

"But there are people who are naturally, they don't like social media. Like you can't tell them anything about social media. They don't see the need for it. They, they are wondering how do you even, what are you even taking?"

She then goes on to add an interesting anecdote about a conversation she overheard in which three young men expressed negative views:

"I was having lunch in a hotel, and some young men, I think three of them, were discussing about the social media. And they were saying, now, what do people even do there, it's a waste of time? [They said] I just go there to read what people are doing, what they are posting. Because people like posting lies on Facebook. There is nothing there. You can't learn. So many bad things! And at that time, I'm looking at them like, you know I'm just listening, they were not my friends.. They were talking. So I was just there thinking, wow, what is this? These young people are really behind. They are quite young people at the age of 30 and they don't see anything good about social media ..."

There is some evidence, albeit somewhat limited, of negative views of social media, including among youth.

11.5 Summary and directions for future research

Lack of funds limits participation in social agriculture because of the cost of purchasing phones and data. The lack of funding for investment is also a general constraint to engaging in farming. There is a need for further research to find out what government and private funding institutions know about social agriculture and how they could support it. Further research on the particular financial problems faced by women and by youth in social agriculture would be useful for such funding institutions.

Comments from some of the interviewees point towards an image of “villages” as remote and cut off from modern urban developments. These comments suggest that the elderly in villages either do not know about the internet or how to use smartphones, and the youth in the villages—if they do use social media—are not interested in agriculture. There is also some evidence that some of the youth are not even interested in social media. Further research into the spectrum of views about social media, and the distribution of such attitudes in relation to rural-urban differences and educational differences, would help frame the scope and scale of social agriculture and clarify barriers to participation.

12 Conclusion and recommendations

This section summarizes the main findings of the study and provides a brief conclusion followed by a set of recommendations.

12.1 Conclusion

This study examines the phenomenon of social agriculture in Kenya. It aims to understand what Kenyan farmers are doing with the tools available to them on social media, to support them in documenting their experience of using social media for their livelihoods, and to identify ways in which this might be supported.

The majority of social agriculturalists interviewed are young, in their twenties and thirties, and they have higher education qualifications in agriculture and related subjects. They all use social media for their livelihoods, but there is a wide spectrum in the extent of engagement with social media. The majority use social media to help develop their farming practices, but there are also a few for whom social media has become a significant part of their overall livelihood activities and takes up a lot of their time. Social agriculturalists see themselves as forming a new and growing community that communicates and shares via social media. Many call themselves “agripreneurs,” a term that captures the sense that they are dynamic and entrepreneurial individuals who engage in social media to pursue their individual goals.

Social media is used for accessing information, for buying and selling, and for participating in online groups. Participants use social media to access information about all aspects of farming, including: crops, techniques of cultivation, sourcing equipment and inputs, and marketing and selling their produce. Social media has made selling and marketing much easier and is narrowing the gap between producers and clients.

Online groups are where contacts are made, information exchanged, and solutions offered. Participants agree that “good” groups have discipline and focus, and a lot of help is available from group members. Administrators and moderators of “bad” groups allow posts that wander off topic and so introduce all sorts of extraneous contributions.

Overall, the use of social media for selling and marketing, for participating in groups, and for accessing information shows that social media has become an essential and integral part of social agricultural livelihoods.

The uses of social media, especially for participating in groups and for accessing information, reflect and sustain a definite sense of community. Much activity, however, is not community-oriented. Information is also gathered and used by individuals in pursuit of their own goals, and this information is not shared. Running groups too is a strategy for building reputation and income. Large groups can become a site of struggle for control. There is also negative behavior like bullying and harassment, especially but not exclusively against women.



The two main platforms used are Facebook and WhatsApp. Facebook is widely used for posting and for group activities. It is also a place for information and advice. WhatsApp is used for messaging and for participating in groups that are closed and relatively private. These two platforms are the most closely interlinked by user activities. Users typically move contacts from Facebook to WhatsApp for private negotiations and finalizing deals. YouTube is widely used for information and by agronomists to build their reputation. Other platforms, like Twitter and Instagram, have fewer users but may be growing. Telegram and TikTok are not widely used.

As with social media in general, social agriculture has problems with scammers, lack of trust, and bullying and harassment. The widespread activities of con men lead to a major lack of trust, and this makes buying and selling more difficult. People have learned ways of doing “due diligence” to check that people are trustworthy and to avoid scammers. Bullying and harassment are frequently reported, especially against women. Women may limit their interactions to private messaging on WhatsApp and sometimes by joining women-only WhatsApp groups.

Gender plays a critical role in how both women and men navigate online space and social media platforms. A key trend is that many women face gender-based sexual harassment. This has been central to how these women use the platforms, adopting methods to avoid unsolicited messages or images. Women also face negative attitudes when engaging in agriculture. In many cases, male perceptions are that women should not be in agriculture, at least not publicly in their own right as farmers or other agriculture-related roles.

Barriers to participation in social agriculture include lack of finance for investment, poverty, lack of education, old age, and negative views of social media. Lack of funds limits participation because of the cost of phones and data. A general constraint is the lack of funding for investment in farming. Some interviewees see “villages” as remote and cut off from modern urban developments including the use of social media. Their view is that the elderly in villages do not know about the internet or how to use smart phones, and the youth in the villages, if they do use social media, are not interested in agriculture.

Overall, the participants expressed a very positive view of social media. Engagement with social media has enabled them to learn, to access new opportunities, to buy and sell and market themselves, and to support and develop their livelihoods.

Beatrice emphasizes the way social media and farming are now inseparably linked:

"It's farming and social media, they are very interrelated. Like, it's not even possible to separate them ... now we can even buy things online, like inputs. Without leaving your farm, you can buy fertiliser, chemicals, what have you. Like for myself now, I actually got even to know the price of something ... Now people are buying things online, companies are now sending things to farmers from the head office to the farmer in whichever place they are. So I would say farming for me and social [media] ... They are very integrated. Eh, they're moving hand in hand. You cannot separate either from the other one."

Beatrice is using the example of buying, but the same was said by interviewees about the central role of social media for getting all sorts of information for their businesses, for learning about new opportunities, and for participating in online groups to make new contacts across Kenya, in neighboring countries, and even further afield.

Beth summarizes the general sense of many people's perspective on the use of social media for agricultural practices :

"So I can only say that social media has been wonderful. It's really wonderful."

12.2 Recommendations

The recommendations are all grounded in the views of the research participants, but in some cases the research team have had to go a step further to formulate the recommendations and indicate how they will address problems.

12.2.1 Platforms need to find effective ways to verify the identity of users.

There is a pervasive problem of lack of trust on social media, especially on Facebook, mainly because of the high incidence of con men. The activities of con men and scammers also involve widespread provision of misinformation. Effective verification of identity of users will be a great help to overcome trust issues, to enable safe buying and selling, and to suppress the amount of misinformation. (Platforms)

12.2.2 Platforms, especially Facebook, need to find ways to block or curb frequent bullying and harassment.

There is a widespread problem of bullying and harassment, especially of women who are often recipients of sexual messages and images. Platforms, especially Facebook, need to prevent bullying and harassment. This will make the use of social media more professional and engaging and lead to greater participation, especially by women. (Platforms)

12.2.3 There is a need for more education to support people to use the platforms more effectively.

New users find it difficult to know how best to post information in order to reach clients. A couple of users called for Facebook to provide a “tips and tricks” section to teach people to use the platform more effectively. Educational support should also prepare users for how to deal with negative behavior. There is, therefore, a need for education to prepare people to use platforms more effectively and a duty on the part of platforms to provide new users with sufficient warnings about different issues they may face, e.g., abuse, misinformation, and sexism. Meta needs to make “tips and tricks” more regularly presented by the feed, which is controlled by the algorithm(s). Education and training could be provided by suitable information on the platforms and by government and/or foundations’ programs in schools and community locations. Better knowledge of how to be effective on social media will increase the development of social agriculture and lead in turn to better productivity and distribution as well as enhanced livelihoods. (Platforms, Foundations, Government)

12.2.4 Relevant agriculture-related information could be provided on dedicated agricultural websites and/or on platforms.

Several interviewees noted problems accessing certain kinds of agriculture-related information. For example: data on past and current prices for crops and services to help farmers budget and plan; information on specific crops with regional-specific information on conditions like weather patterns, soil, and available resources like irrigation; and data about imports of fruit and vegetables into the Kenyan market, about which there seems to be very limited information available. The provision of relevant agriculture-related information on dedicated agricultural websites and/or on platforms would improve access to data and greatly help farmers plan to meet market opportunities. (Government, Foundations, Platforms)

12.2.5 There is a need for greater access to funding for agricultural development, especially for women; financial institutions should be more flexible in how they look at loan securities for women; and there is room for coordination between donors to enhance access to funding for social agriculturalists.

A number of interviewees commented on the difficulty finding funds for investment in their enterprises. There should be greater access to loans for agricultural development. This would support participation in social agriculture generally and would be especially important to help small-scale farmers develop their businesses. Easier access to finance would also help strengthen inclusion by enabling the purchase of smartphones and mobile data. (Government, Foundations)

Access to loans is a particular problem for women because collateral, like title deeds, is generally not in women's names. Financial institutions should be more flexible in how they look at loan securities for women. There is a need for financial institutions to become adaptable to the shifting profile of prospective clientele, e.g., youth entering farming without recognized collateral or formal employment status, or women requiring documentation that is impossible to obtain, e.g., title deeds. (Government, Foundations)

A Kenya-wide look at funding for different agricultural groups was beyond the scope of this project, but no funding specifically for social agriculture was found. Participants did mention examples of international and government-funded projects, including by the World Bank, World Food Program, and Action Aid. There is scope for coordination between donors to support funding specifically for social agriculturalists, for example, by providing funding to selected social agriculture online groups. This would enable greater inclusion and participation in a dynamic and innovative sector of the agricultural economy and so strengthen agriculture-related livelihoods. (Government, Foundations)

12.2.6 There needs to be further research to ensure secure payment systems, including possible integration of payment providers into platforms.

Several interviewees commented that making payments could be easier and more secure. This issue is closely linked to the problems of trust and verification of identity. M-Pesa is the most commonly used payment system, but it is possible for payers to reverse payments on M-Pesa, which can lead to losses for the seller. Some participants avoided this problem by having "till" accounts with M-Pesa, which requires permission from the payee for reversing a payment. There needs to be further research to ensure secure payment systems. Participants did not make this suggestion, but it could be worth exploring the integration into platforms of links to M-Pesa and other mobile payment providers if this would make payments more secure. (Platforms, Fintech)

12.2.7 Platforms could look at extending the lifetime of advertising-enabling features.

People are increasingly using the “status” function on WhatsApp and Instagram Stories to reach their contacts with updates about their business. Updates to one’s status currently stay up for only 24 hours. Two participants said there is a need to keep the status updates on WhatsApp live for a week at least. This would improve their visibility. (Platforms)

12.2.8 There are several areas for further research.

- Research to find out what government and private funding institutions know about social agriculture and how they could support it.
 - Research on the particular financial problems faced by women and by youth in social agriculture. This would be useful for any relevant funding institutions and networks.
 - Research into the negative views about social media, and the distribution of such attitudes in relation to rural-urban differences and educational differences, would help frame the scope and scale of social agriculture and clarify barriers to participation.
 - Research on use of mobile payment systems, as noted in section 12.2.6.
-

References

- "About Us." Abundant Earth Foundation. <https://abundantearthfoundation.org/about-us/>.
- Alobo Loison, Sarah. "Rural Livelihood Diversification in Sub-Saharan Africa: A Literature Review." *Journal of Development Studies* 51, no. 9 (2015): 1125–38. <https://doi.org/10.1080/00220388.2015.1046445>.
- Caribou Digital and Kilimo Source. *Social Agriculture: A Literature Review*. Farnham, Surrey, United Kingdom: Caribou Digital Publishing, April 2022. www.platformlivelihoods.com/social-agriculture-lit-review.
- Caribou Digital and Learn.ink. *The Ecosystem of "Social Agriculture."* Farnham, Surrey, United Kingdom: Caribou Digital Publishing, May 2022. www.platformlivelihoods.com/social-agriculture-ecosystem-report.
- Chambers, Robert, and Gordon Conway. "Sustainable Rural Livelihoods: Practical Concepts for the 21st Century." Institute of Development Studies Discussion Paper 296. Brighton: IDS, 1991. <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/775>.
- Mwaura, Grace Muthori. "The Side-Hustle: Diversified Livelihoods of Kenyan Educated Young Farmers." *IDS Bulletin* 48, no 3 (2017). <https://doi.org/10.19088/1968-2017.126>.
- Rhoades, Emily, and Kelly Aue. "Social Agriculture: Adoption of Social Media by Agricultural Editors and Broadcasters." (2010). <https://agrilife.org/saas2/files/2011/02/rhoades2.pdf>.
- West, Simon. "Just What Is Agroforestry?" The Word Forest Organisation. April 22, 2022. www.wordforest.org/2022/04/22/just-what-is-syntropic-agroforestry/.
-

Annex 1

Guidance for interviewees and interview questions schedule

Explainer to participants

We are doing research on how farmers are using digital platforms such as WhatsApp and Facebook. We are interested in your experiences using these tools, both good and bad.

We are trying to build a more accurate picture about how people are using these platforms, but also what the challenges are for farmers using them. By listening to you today we will gain a better understanding of how people are using these tools - leading to us publishing research which will help improve the way these platforms are designed.

We are working to make the digital world more accessible, more inclusive, supportive, dignified and ultimately better tailored to help farmers make a living safely through using online tools and platforms.

What to expect

The process today will be informal and open-ended. You lead the process as much as I do. There are no “right or wrong” answers. I am not looking or hoping for any particular answers from you – we are interested only in your personal thoughts, feelings and experiences in whichever way you express them. There is no agenda other than finding out about your opinions and experiences. I am here to represent you and your perspectives so please feel free to express yourself as honestly and openly as you can.

Notes for interviewer/film maker

Research – There are often contradictions in what people say they do during interviews, and what they actually do or attitudes they exhibit. Look out for tensions that arise and gently probe at these moments for more detail.

Please note that the discussion takes place in an organic fashion. The questions/ areas of focus are embedded into the participant’s everyday life and are therefore led by the participant’s behavior. Many of the observations may be led by what they are discussing (“Can you show me...”). Use your understanding of the project background and objectives to flex the discussion to the respondent. Work together, have fun, be creative.

*Try and go a little deeper whenever you can. Remember to ask **WHY/HOW** as much as possible? It’s also good to say, you don’t understand, can you explain it to me in more detail...Lastly if the respondent is talking about something in broad terms which sounds relevant try and follow this to get a bit more detail.*

Can you tell me a story about this? Can you give me an example of that? Try not to take things at face value.

Questions to ask the respondent / In-depth interviews (IDIs) – 60 minutes

Most of the questions should be relevant for most of the roles we find, but some may be role-specific like questions for Group Administrators/organizers. Roles may include: Farmers (various types according to specialisms, scale, location etc.), Service providers (agronomists, logistics etc.), middlemen/ traders (buyers, sellers, aggregators), Companies.

The questions below will build on what we learned from the 20 min Kilimo interview.

1 Questions about ‘you’

- What’s your name/age/county/place of origin?
- Please can you tell me a little bit about yourself?
- Is there anything else you’d like to tell me about yourself (*prompts: university degree, economic background - other ways they identify themselves*)
- Are you farming close to where you originally come from?
- Other related activities or roles like agronomy etc.?
- If you don’t mind, can you tell me what a normal day looks like for you?

2 Use of Social Media (SM) – (this is a big area...)

- What platforms do you use? How long have you been doing this? How did it start etc. (*get the journey in detail*)
- How do you use these SM platforms? Differ for different purposes? Examples?
- What are the main areas of use? Take me through some examples?
- (*Prompts: Obtaining knowledge/information, sharing knowledge, other forms of community support like raising loans in times of crisis, membership of savings and credit circles, promotion, marketing, buying/selling, etc.*)
- How important or not are these kinds of uses? How important is buying information? Is getting farming tips a main activity? (get examples)
- Using one of the things you do most frequently as an example, how does SM facilitate it or hinder it? (*We need to get details of the whole process/workflow in uses of SM with examples*)
- Do you use different SM sequentially, separately etc., what are the steps to linking online and face to face and/or phone contact/payments?
- How has the use of SM affected your employment/work? Has use of SM led to success/ failures and/or changes in your roles/livelihood? (*Get detailed stories*)
- Can you try and compare it for me? Now... and then... What would help you work better?

3 Does SM meet your needs?

- Are there limits to what SM allows you to do? How do you get around these constraints?
- How would you want to change things? Is there anything you would want to create or add (e.g. dedicated Escrow facilities etc., availability of a platform dedicated to Agriculture, with global reach)?
- Has this ever gone wrong? Can you tell me about this?
- What needs does SM fulfil that can't be met in the offline world?
- *(probe what they are using for payments?)*
- If you could make one change to the platform to improve it for the way you use it, what would it be?

4 Learning: *(Some of this will have probably been covered in questions at the start of 2 above, so will need to follow up flexibly here)*

- How did you learn about SM? How did you learn to use SM?
- Is there more that you want to learn, to do things differently or better?
- Is the use of SM quite challenging or just easy?
- Does using SM take up a lot of time for you? *(possible probe: have you ever helped someone else learn how to use social media?)*

5 Effectiveness:

- What can you tell us about how to use SM effectively?
- How often do you engage with SM?
- Is it important at all how you use SM e.g. how you post, message, etc. and/or how others do this? Have you noticed anything important here for how you respond to SM?

6 Groups:

- Are you a member of any groups? Which ones? Why? How did this happen?
- What is your experience of these groups? How do they help or hinder you?
- What makes for a 'good' group or a 'bad' one? *(Ask for descriptions, try to push for thoughtful answers here)*
- How does going online make you feel in relationship to the wider community? *(SM is a very individualistic, atomising activity. This question might uncover wider societal relationships/ tensions that are unseen normally).*

7 For Administrators: *(This section will look to draw out what makes for a successful group (Facebook/Telegram/WhatsApp) and what makes for a bad group)*

- What groups do you run? How did this come about?
- What do you have to do in your role?
- What makes for good/bad groups? How do these differ on different SM platforms? Any strategies to keep quality high?
- What do you lose and what do you gain from being a moderator/admin?

8 Trust: *(This is a central topic/issue)*

- How do you know who to trust? How do you learn this? How do people establish trust? What strategies/practices do you use or see others use to establish and to build trust? *(Cathy reports some relevant features are: Profile, age of account, consistency, reviews)*

9 Problems on SM: *(this is closely linked to trust issues)*

- How do you become aware of the dangers of using SM?
- What experience have you had of any problems and negative interactions? *(e.g. Scams, harassment, bullying, intimidation, exploitation, non-payments, misinformation, censorship)*
- Is SM a risky space? How do you judge this? How do you learn to navigate through this? *(maybe explore here what is meant by 'savviness')*
- In our survey 1 in 4 people said they'd personally experienced bullying on social media. Have you had this experience? Would you be willing to share a story about it (feel free to change names of people involved)?
- Why do you think so many people encounter bullying on social media? Is this a problem in everyday farming life, or a problem that only occurs on social media? If so, why do you think this is?
- Why is nefarious behavior so common?

10 Strategies to counter or cope with problems:

- What strategies do you use or others use to cope with problematic interactions – including how groups operate?
- How do these strategies work? Are they successful? *(We need to see if we can find a number of examples of practices/strategies that have been developed to counter or get around problem interactions e.g. pseudo accounts, multi-homing, women's only groups, controls over access to groups or over activity in groups, defensive groups like 'Buyer beware' groups on Facebook etc., collective action such as boycotting and social pressure)*

11 Gender:

- Do you find that men and women are equally active on SM?
- Are there important differences in what they say and do with SM?
- Do you think there are general expectations of what women and men should and shouldn't do on SM? And in Agricultural work more generally?
- Given the roles you have, how is your activity on and off SM affected by your gender? *(Get details and examples relating to social agriculture)*
- When it comes to selling, who makes better sales (male or female) on social media and why?
- Who is trusted more (male or female) and why?
- How are people organizing against abusive behaviors? Is this done through groups? *(i.e. like Cathy mentioned, a group solely for women in Agriculture)?*

12 Patterns of use and changes:

- Do you see any major patterns in the use of SM, like according to age, or according to gender?
- What other factors relate to use patterns?
- We're hearing that people seem to be moving from Facebook to Instagram. Have you noticed this?
- Are there changing fashions in the use and uptake of different SM platforms? How does this work?

13 Are there people who are excluded from using (and benefiting from) SM?

- Who are they and what are the reasons for them not using SM? *(Prompts: age, education, gender, location, socio-economic status etc.)*
 - What would be your advice to these people?
-

Annex 2

Table of 21 in-depth interviews

| Pseudonym | Role(s) | Age |
|-----------|---|---------|
| Jane | Farmer, Agronomist (product sales), Runs WA group | youth |
| Paul | Veterinarian, Farmer | mid-age |
| James | Farmer, Consultant, Moderates several groups | youth |
| Anna | Farmer | youth |
| Edward | Farmer, Syntropic agriculture trainer | youth |
| Mary | Farmer, Intern in government farming program | youth |
| Catherine | Farmer, Owns FB page | mid-age |
| Simon | Farmer, Consultant, YouTube channel developer | youth |
| Beatrice | Farmer, Agronomist, Runs WA group, Owns FB group | youth |
| Beth | Farmer, Runs WA group | older |
| Martha | Farmer, Video content developer, Customer service worker | youth |
| Susan | Livestock farmer (pigs) | youth |
| Luke | Tree planter, Conservationist | mid-age |
| John | Farmer | youth |
| Felicity | Urban “vertical garden” builder and installer, Runs model urban garden | youth |
| Peter | Greengrocer (online and brick-and-mortar shop) | mid-age |
| Mark | Agricultural consultant, FB group administrator | older |
| Florence | Agronomist (seed distribution), Aggregator and marketer via WA group she runs | older |
| Alice | Middleman, Online merchant (onions, potatoes, fashion goods), Student | youth |
| Thomas | Livestock farmer (pigs), Engineer | youth |
| Stacey | Farmer, Consultant Agronomist, Owns WA group and FB group | mid-age |

Key: WhatsApp (WA); Facebook (FB)

Summary of participants' roles:

| | |
|---|---|
| 15 farmers (including 3 who keep livestock) | 1 middleman (online buyer and seller) |
| 7 agronomists/agricultural consultants | 1 business owner (building urban gardens) |
| 1 agronomist (seed distributor and aggregator/marketer) | 1 greengrocer (online and offline business) |
| 1 syntropic agricultural trainer | 1 veterinarian |
| | 1 tree planter |

Note: Some participants hold multiple roles.

Annex 3

Consent form

SOCIAL AGRICULTURE PARTICIPATORY FILM-MAKING PROJECT

Kilimo Source (Kenya)

RELEASE FORM

**Interview, Photographic, Video, Motion Picture and Sound Recording
Rights Release & Assignment**

I _____, hereby grant to Kilimo Source and its officers, agents, employees, contractors and collaborators (Caribou Digital UK, Learn. Ink, Habitus Insight) hereafter referred to as “The Researchers” the following rights and permissions:

I hereby consent to taking part in this participatory film-making project, and to capturing video recordings of my life to be shared with The Researchers in order to make a short film about me and my social agriculture practices. I understand that the recordings and associated data and information will be stored by The Researchers on cloud-based and physical storage devices and held in accordance with General Data Protection Regulation (GDPR); I understand that the video recordings will be the copyright of The Researchers and any other intellectual property which arises in or from the recordings will also belong to The Researchers;

I hereby consent to The Researchers using the video footage captured during this project, and the recording of my initial interview(s) to produce film clips that will be shared publicly and will be available for public consumption;

I understand that that my identity will be discernible from any such publicly available material;

I confirm that I am over 18 years of age and have the right to contract in my own name. This agreement will be binding upon me, my heirs, legal representatives, and assigns.

By signing below, I acknowledge that I have freely and voluntarily entered into this agreement.

Signature

Print Name

Date

Annex 4

Research team and partners

The research team for this qualitative report consisted of Cathy Kamanu and Finn Richardson from Kilimo Source in Kenya; Eoghan McDonagh, Eliza Casey, and Chris McDonagh from Habitus Insight; and Adam Wills from Learn.Ink. The Caribou Digital members of the team were Jonathan Donner, Emrys Schoemaker, and H       Smertnik.





Social Agriculture in Kenya
Farmers' stories of their use of social media for agricultural livelihoods

