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How do urban agriculture initiatives communicate on farming across society? An exploration of awareness, responsibility, and pride messages on social media

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Abstract

Generational renewal problems in the farming sector highlight the urgent need to attract new farmers and address misconceptions about agricultural careers. This can be achieved by strengthening the connection between the farming community and society. Emphasizing the alternative food movement's role in attracting new-generation farmers, we focus on the urban agriculture movement and its communication efforts to better understand the changing relationship between agriculture and society. This study examines how urban agriculture communicates about farming by analyzing the use of social media messages related to awareness, responsibility, and pride. Analyses are based on the professionals' perspectives (28 in-depth key informant interviews) and social media data (four selected Instagram accounts) in Pennsylvania and Illinois. We utilized qualitative thematic coding, guided by Polymedia theory and the Norm Activation Model. The results indicate that dialogues around urban agriculture encourage individuals to engage in discussions about healthy eating and to critically assess their understanding of industrial agriculture. Our study reveals that Instagram messages often emphasize responsibility and pride, which play a significant role in storytelling. These pride messages, linked to personal, relational, or professional achievements, are prevalent in the communication. However, very few messages address the economic aspects of farming, suggesting that financial issues and access to resources are not prioritized in these discussions. The study confirms that the online representation of urban farmers enhances their personal recognition by showcasing the diversity of farmers in terms of race, gender, ethnicity, and farm size, which differ from how traditional farmers are depicted in conventional media.

Keywords Generational renewal problems in farms · Urban agriculture · Social media analyses · Instagram · Farming career · Emotion of pride · Online communication · Youth in agriculture

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Introduction

The generational renewal problem in farming is a critical issue that involves the difficulties of attracting individuals who are capable and willing to pursue careers in agriculture. This phenomenon is particularly exacerbated by an ongoing trend of an aging farming population, especially in the U.S., where an increasing proportion of farmers are approaching or have reached retirement age (USDA 2022).

Addressing the generational renewal in agriculture requires supporting the continuation of farming with young and new farmers. While farming is an essential sector, it still needs to be more adequately understood by the broader societal context, which is often plagued by societal misconceptions (Pinkerton et al. 2021; Szymkowiak and Rhodes-Reese 2022). Enhancing individuals' career aspirations in agriculture is one of the key steps in addressing the challenges related to generational renewal problems in farming.

Recent studies examining the agricultural communication efforts of alternative food movements reveal the impact of these movements' communication strategies on the emergence of new-generation farmers. Alternative food movements related to agriculture and food systems, such as the urban agriculture movement, local food, organic food movement, and fair-trade movement, challenge the industrial food system by advocating for socially just, environmentally sustainable, and economically viable food practices (Allen 2003; Stevens et al. 2016; Unay-Gailhard and Breannan 2022).

Besides the importance of alternative food movements on the transition of the agricultural sector, these movements are also prominent in research on farm entry studies in the U.S. Researchers interested in farm entry behavior documented that alternative food movements bring the trend of increasing numbers of new farmers from families who are at least two generations removed from agriculture, and beginning farmers who enter agriculture as a second career (Bruce 2019; Seymour and Utter 2021). As documented by Bruce 2019; alternative food movements play a role in farming-career construction by providing career aspirations, training opportunities (e.g., internships and apprenticeship programs), and career progression with new marketing strategies.

This study seeks to position alternative food movements' communication efforts as central to understanding the evolving relationship between agriculture and society. The literature on alternative food movements and their influence on farming-career construction has been heavily focused on face-to-face interactions. Even though some scholarship on farm entry has given insights into the contribution of digital media to farming-career construction by providing a space in which career ideas can grow and viewers can acquire

the self-confidence for a career intention (Iles et al. 2023; DeLong et al. 2023; Unay-Gailhard and Brannan, 2022; Unay-Gailhard and Simoes, 2022), a clear understanding of the potential of digital communication on the farming-career construction is still lacking. In this study, we aim to fill this research gap and explore the online communication efforts of alternative food movements on farming across society.

The rise of internet use made the alternative food movements one of the most prevalent forms. Through the demasification of communications, the internet's development promotes alternative food movements by enabling more personal interactions (Press and Arnaud 2011). The online presence of alternative food movements brought a new era in the public perception of farming as a profession by reshaping the public image of farmers (Bruce 2019). Digital media platforms, including but not limited to web pages, blogs, Instagram, Reddit, Facebook, X, TikTok, and YouTube, offer a unique environment that enables individuals to participate in and influence alternative food movements (Unay-Gailhard et al. 2023). These digital spaces facilitate curating and disseminating content related to agriculture and food issues, allowing users to consume and contribute to the dialog surrounding alternative food practices.

This research contributes to understanding of farmers' online representations in alternative food movements by examining two key aspects from an agricultural communication perspective: how they are framed and by which tones. As highlighted by Bruce (2019), the traditional perceptions of farming and farmers in the media are significantly transforming. Organizations such as The Greenhorns and the National Young Farmers Coalition, proficient in utilizing media, have contributed to a reimagined portrayal of beginning farmers. Contrary to the traditional farmer images, new farmers are increasingly depicted as "*young, urban and suburban beginning farmers with no farming experience*." According to the study by Press and Arnaud (2011), Community Supported Agriculture (CSA) has gained legitimacy as a market form in which their online presence plays a role in transmitting cultural imaginary. The authors argue that the online presence of CSA has an underlying "*tone of moral superiority*" that they demonstrate by opposing the industrial food system. These portrayals of "*young, urban and suburban beginning farmers with no farming experience*" and use of "*tone of moral superiority*" call for a further exploration of the communication efforts of alternative food movements.

To deepen our exploration of relationships and improve clarity, we focused our study on one of the essential alternative food movements: the urban agriculture movement. Urban agriculture defined as the "*cultivation, processing, and distribution of agricultural products (food or non-food) in urban and suburban areas*" by the USDA (2024). In

recent years, urban agriculture has experienced significant growth as a possible alternative to industrial agriculture that can meet the needs of an increasing urban population. Overall, urban agriculture initiatives support economic, social, and environmental development in cities by improving access to fresh food, developing ecological values, providing educational programs, and developing communities.

This paper investigates urban agriculture initiatives in Pennsylvania and Illinois. As part of the larger project, this study addresses the following broader question: “*How do social media accounts managed by urban agriculture initiatives communicate on farming across society?*” The study approached the question with a two-stage qualitative research design. It aimed to explore online agricultural communication by urban agriculture initiatives by assessing the professionals’ perspectives (qualitative analyses-I), followed by prospecting via social media analyses (qualitative analyses-II).

In the qualitative analyses-I, we approached the question *Q1: How are relationships and interactions shaped and managed within social media accounts of urban agriculture initiatives?* We aim to explore the professionals’ experiences and attitudes (data includes in-depth interviews ($N=29$) with leaders, directors, policy administrators, and digital communicators from urban agriculture initiatives) representing their perspectives on urban agriculture communication in social media and its influence on the images of the farming profession. The thematic coding approach is guided by the Polymedia theory (Madianou and Miller 2018), which investigated the integrated structure of social media in managing as well as engaging online relationships effectively.

In the qualitative analyses-II, the study approached question *Q2: How are urban farming issues, actors, and actions communicated in social media accounts of urban agriculture initiatives?* The study is interested in social media analyses (the data includes messages posted by urban agriculture initiatives on the selected four Instagram accounts) between 2022 and 2024. Within the list of 1100 posts, we explored the communicating urban agriculture patterns and the position of the farming profession. The Norm Activation Model (Schwartz 1977) guides the thematic coding approach, which explains the altruistic behaviors to understand pro-social and pro-environmental intentions.

This paper is structured into six sections. The second section provides the background information with a literature review. The third section gives a study framework with guided theories. In the fourth section, the used data, research design, and methodology are detailed. The results section presents the findings of qualitative analyses-I and II, respectively. The final section summarizes the study results and provides inputs for future research.

Background

The literature review first provides the key theoretical arguments explaining engagement in urban agriculture initiatives. We then review the empirical evidences that give insights into the relationship between online urban agriculture engagement and career intention in farming.

Urban agriculture: a moral economy perspective

Urban agriculture is a form of food and non-food production that occurs in urban and suburban areas and, in some cases, is accompanied by food processing and distribution (Russ and Gaus 2021; USDA 2024). Three main aspects characterize urban agriculture initiatives. First, it includes various sites such as community gardens, rooftop gardens, individual gardens, institutional gardens, fair-trade food-producer cooperatives, horticulture, aquaculture, and hydroponics. Second, it integrates into the broader food system through efforts such as urban farmers’ markets and CSA initiatives, farm-to-restaurant, and food-to-school linkages. Lastly, it is multifunctional, offering social, environmental, political, and economic benefits (International Resource Panel, 2021; Diekmann et al. 2020; Pradhan et al. 2023; Prové et al. 2019; Russ and Gaus 2021).

Urban agriculture in the U.S. is a growing industry, with roots in the late 19th and early 20th centuries (Fifolt et al. 2018; Rangarajan and Riordan 2019), and plays a significant role in fostering moral values (e.g., self-reliance, sustainability, and ethical consumption) within communities with initiatives that intersect with morality and economic activities and challenge the conventional view that morality and the market are opposing forces (Weissman 2015). Urban agriculture initiatives are surrounded by pro-social, pro-environmental, and pro-political intentions and behaviors and refer to the production, distribution, and dissemination of moral values, emotions, and norms within a social, cultural, and political space.

Pro-social behaviors within urban agriculture encompass intentional actions to benefit oneself, others, and the environment. The urban agriculture initiatives promote the welfare of individuals, groups, or organizations by providing food security, encouraging healthy eating habits, offering education on food and farming, and fostering community building and school connectedness among students. It also includes community-building efforts by hosting publicly open events and programs and being involved in participatory actions that foster communal support and social-emotional growth through which participants receive recognition for engaging in urban agriculture (Das and Ramaswami 2022; DeMarsh 2022; Dimitri et al. 2016; Filfolt 2018).

Pro-environmental intentions and behaviors within urban agriculture initiatives involve deliberate actions shaping moral values. These are accomplished by fostering a sense of connection to nature, offering hands-on farming, food, and environmental education with an emphasis on ecojustice knowledge, promoting ecological citizenship, composting at urban agriculture sites, distributing finished compost to urban agriculture sites, and participating in green projects and climate advocacy initiatives (Ceaser 2012; Fifolt et al. 2018; Halvey et al. 2021; Murrah-Hanson et al. 2022; Schneller et al. 2022; Travaline and Hunold 2010).

Pro-political intentions and behaviors within the urban agriculture initiatives bounded with civic engagement (as one form of political participation) and awareness of political issues on social justice, food desert, food justice, racially discriminatory urban policies, and political organizing (Russ and Gaus 2021; Sonti et al. 2016; Weissman 2015). Pro-political behaviors also include governmental support and the integration of agriculture into urban planning and policies (Prové et al. 2019). As documented by Halvey et al. (2021), in the scope of urban agriculture policies, there is an increasing frequency of governments engaging in public-private partnerships, and these partnerships illustrate the growing role of civil society groups as collaborators in the municipal government processes rather than just stakeholders.

The online presence of urban agriculture

Urban farmers and other urban agricultural stakeholders manage and engage with various types of digital media, such as websites, blogs, social media, and mobile applications for information exchange through personalized communication. Even though the importance of online outreach methodologies for agriculture communication (Lubelle and McRobert 2018) is well-established, we need to gain more knowledge on the impact of the online presence of urban agriculture initiatives on the changing perceptions toward farming careers (Unay-Gailhard and Brennan 2022).

The reviewed studies in the area of the online dimension of urban agriculture engagement cluster along two lines of research: (i) studies providing insights into the personal, relational, and organizational values and cultural imaginaries promoted by online urban agriculture initiatives (Press and Arnould 2011; Reed and Keech 2018, 2019) and (ii) studies reporting findings on the relationship between social media usage and career intention in farming via career exposure and career experimentation (Broad 2020; Manning 2019; McGinnis et al. 2020; Solis-Toapanta et al. 2020).

In the first area of research, a study by Press and Arnould (2011) provides a socio-historical perspective on how CSA programs have gained legitimacy as a market form. The

authors highlight the role of the internet in building that legitimacy by promoting more personal communications by the demassification of communications. The authors conclude that CSA programs are an essential example of a cultural imaginary that induces a change in agri-food production and marketing in the U.S. Reed and Keech (2018) studied urban agriculture activism on Twitter by examining users' and viewers' comments and exploring how people participate in society via social media. Findings show that while materials posted by users are mainly concerned with creating a shared, normative picture of urban food which sustains the networks, an examination of viewers' comments found that these online networks are a primary tool of social interaction and promote pro-social online behavior.

In the second line of research, McGinnis et al. (2020) investigated the online outreach methodologies for reaching millennials. This generation is an important source of customers for the horticulture industry, accounting for one-quarter of all horticulture purchases in 2018. The authors share examples of initiatives (e.g., Seed Your Future) that promote horticulture as a vibrant career opportunity and highlight the role of social media, particularly Instagram, as a cornerstone of millennial outreach. Posts focusing on building a two-way partnership by emphasizing shared values of sustainability, local foods, and wellness would be appealing terminology and subject matter.

A study by Solis-Toapanta et al. (2020) is an example of the career-experimentation role of social media in urban farming, particularly indoor gardening with hydroponics. The study investigated the social media platforms of Reddit (user-generated information and resource exchange among niche online communities), analyzing users' posts and viewers' comments on topics such as production systems, plant lighting, and the root-one environment. The authors' findings show how online platforms generate an opportunity to address knowledge gaps and online outreach efforts help foster positive experiences among interested individuals in farming. Studies by Broad (2020) and Manning (2019) report the impact of social media communication strategies on a Brooklyn-based commercial indoor vertical farm that specializes in hydroponically grown herbs. The authors documented the impact of the company's public engagement campaign "Next-Gen Farmers" in promoting career training initiatives as a path for creating career aspirations as founders of indoor urban farming companies.

Study framework

This study takes an integrative approach to explore online communication of urban agriculture initiatives on farming across society. The analyses are guided by the Polymedia

theory (Madianou and Miller 2018) and the Norm Activation Model (Schwartz 1977), and the intersection among them. Figure 1 illustrates the study framework, including two-step qualitative analyses that address two study questions.

Step I: Exploration via professional perspectives

In the first step of the qualitative analyses, the study approached Q1, and the Polymedia theory, which is dedicated to understanding the complexities of digital communication, informed the analytical steps. The term “polymedia” refers to the integrated relationships and interactions created by digital media rather than viewing media as an isolated tool (such as traditional ‘one-to-many’ media).

Social media engagement & management

The Polymedia theory suggests an integrated structure where individuals engage with and manage digital platforms. Digital media engagement includes connecting with, interacting with, and building relationships through digital channels. Digital media management refers to the process of organizing, creating content, and measuring all media assets. This integrated structure contributes to a broader communicative ecology that shapes social relationships and realities.

Research examining young farmers’ career paths through a sociological lens shows that digital media not only transforms technology but also impacts behaviors and relationships, resulting in emotional, social, and moral effects (Unay-Gailhard and Brennan 2023). This study investigates the experiences and perspectives of professionals involved in urban agriculture initiatives as they reflect on their

different engagements and share their social media management practices.

Step II: exploration via Instagram messages

In the second step of the qualitative analyses, the study approached Q2 with the guidance of the Norm Activation Model. The Norm Activation Model explains altruistic behaviors and is used by scholars to understand pro-social and pro-environmental initiations and behaviors (De Groot and Steg 2009a; Groot and Steg 2009b; Hunecke et al. 2001; Onwezen et al. 2013). In our study, the Norm Activation Model developed by Schwartz (1977) was used as a framework for understanding individuals’ pro-social and pro-environmental intentions to engage in urban agricultural initiatives. Personal norms are the core of the Norm Activation Model and are used to predict intentions and behaviors determined by awareness (awareness of consequences), responsibility (ascribing responsibility), and personal norms (e.g., emotion of pride as an item in the measurement).

Awareness messages

A key element of the Norm Activation Model is that when individuals become aware of the possible negative outcomes of their actions, it can activate their personal norms. These activated norms then encourage them to adopt more sustainable practices. This activation process is essential for promoting pro-social and pro-environmental behaviors as responsible actions. The awareness of consequences is defined as the negative consequences of not performing the specific behavior (e.g., agreeing with the statement “global

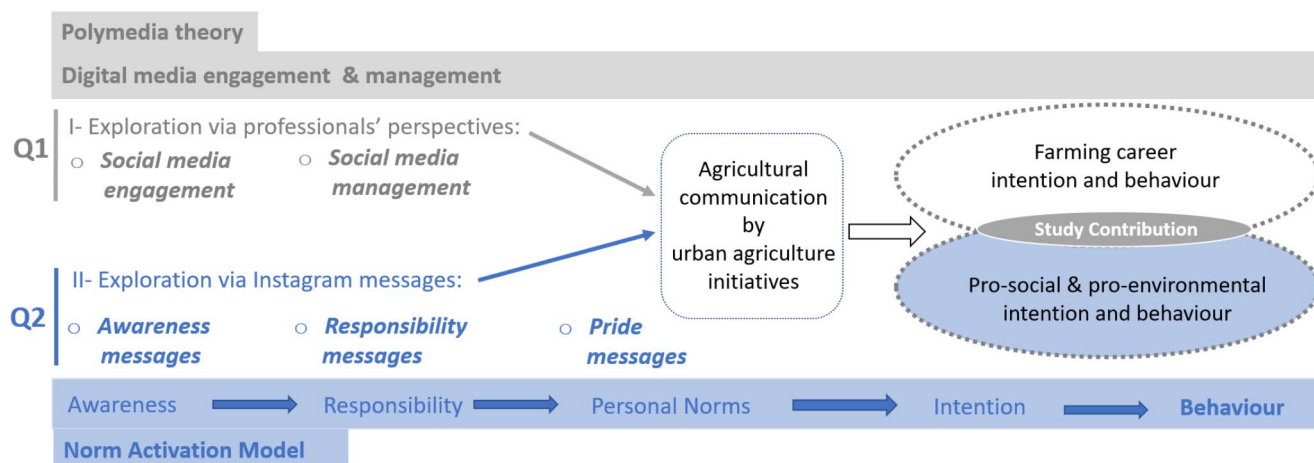


Fig. 1 The study framework: exploring agricultural communication on social media by urban agriculture initiatives. (1) The graphical representation of the Norm Activation Model was adapted from De Groot and Steg 2009; Onwezen et al. (2013); (2) The intersection of the Polymedia theory and the Norm Activation Model (accepted as a mediator model in which awareness of consequences influences personal norms

via ascribed responsibility) have built the study framework; (3) Q1: How are relationships and interactions shaped and managed within social media accounts of urban agriculture initiatives? and Q2: How are urban farming issues, actors, and actions communicated in social media accounts of urban agriculture initiatives?; (4) The **bolded and italicized** themes are detailed in the following

Table 1 Overview of data structure–qualitative social media analyses

| LOS | Themes and Sub-Themes |
|-----|--|
| | I-Awareness of consequences: Messages aim to increase the awareness of the negative consequences for oneself, others, or other things when not acting pro-socially and pro-environmentally by using sources of scientific information, facts, and thoughts. |
| M | i) Awareness of consequences for oneself: Messages that aim to increase awareness of the performing or not performing of a particular behavior have certain consequences (negative/positive) for oneself. |
| S | ii) Awareness of consequences for others: Messages that increase the awareness of performing or not performing a particular behavior have certain consequences (negative/positive) for others and society. |
| S | iii) Awareness of consequences for the environment: Messages that increase the awareness of the performing or not performing of a particular behavior have certain consequences (negative/positive) for the environment. |
| | II-Responsibility: Messages communicate an improvement of responsibility for the negative consequences of not acting pro-socially and pro-environmentally. |
| M | iv) Self-responsibility: Messages that suggest involvement in responsible, answerable, or accountable actions within one's self-control. |
| S | v) Civic responsibility: Messages that suggest active participation in public life to improve the life of one's community or address broader public issues beyond one's self-responsibility. |
| S | vi) Professional responsibility: Messages that communicate the good qualities of a profession while applying skills and reaching decisions for, or on behalf, of others, as professionals. |
| | III- Emotion of Pride: Messages expressed the emotions from the specific achievements by using authentic pride scale words of accomplishment, achievement, confidence, fulfillment, productivity, self-worth, and success. |
| S | vii) Personal achievements: Messages that specify or label the positive contributions to the individuals' life, such as contribution to the skills, goals, and morals of individuals for their life and current and future career developments. |
| S | viii) Relational achievements: Messages that explicitly express the achievements of supportive and solid relationships, including community, national, and international level relations, as well as internal and external relations of the institution. |
| S | ix) Professional achievements: Messages that communicate the professional success as a result of the successfully implemented work tasks and their contributions to the economic, social, and environmental accomplishments. |

The legend “Level of Support (LOS)” is defined as S=Strong support; a majority of the analyzed Instagram text messages were included in this category; M=Moderate support, some of the analyzed Instagram text messages contained statements in this category; T=Tentative support, a very small number of the analyzed Instagram text messages included statements in this category

warming is a problem for society”; Choi et al. 2015; De Groot and Steg 2009).

Responsibility messages

Another key element of the Norm Activation Model is the ascription of responsibility, which significantly influences personal norms, affecting intentions and behaviors. The Norm Activation Model suggests that people are more inclined to engage in pro-social or pro-environmental actions when they recognize the negative impacts of their behaviors and feel a personal obligation to address them. Ascription of responsibility is described as the feelings of responsibility for the negative consequences of not performing a specific behavior (e.g., agreeing with the statement, “*I feel jointly responsible for the energy problems*”; Choi et al. 2015; De Groot and Steg 2009).

Pride messages

The emotion of pride plays an important role in the Norm Activation Model, especially when it comes to fostering pro-social and pro-environmental intentions and behaviors. Pride, as a self-conscious emotion, can serve as a motivator, particularly when individuals anticipate positive outcomes associated with their actions.

The emotion of pride is a key component in measuring personal norms, as highlighted in previous studies (Harland et al. 1999; Hopper and Nielsen 1991; Thøgersen 2009; Vining and Ebreo 1992). Guided by these studies, we considered pride as an emotion associated with personal norms. This study used the authentic pride scale proposed by Tracy and Robins (2007), which includes words of accomplishment, achievement, confidence, fulfillment, productivity, self-worth, and success, and connotes the full range of academic, social, moral, and interpersonal accomplishments. This research assesses the pride messages shared by urban agriculture initiatives and explore the question of how urban agriculture issues, actors, and actions are communicated by expressing the emotions from the specific achievements: personal, relational, and professional achievements. (detailed definitions provided in Table 1).

By integrating the Norm Activation Model with the Poly-media theory, the study aims to enhance the explanatory power regarding individuals' pro-social and pro-environmental intentions to engage in urban agricultural initiatives that may shape social relationships and realities (e.g., alter misconceptions about agriculture, and create career aspirations in farming via messages in digital media).

Data and research design

This research aims to understand the use of social media by urban agriculture initiatives in Pennsylvania and Illinois. Studied two states have vibrant urban and peri-urban agriculture sites with commercial and non-commercial initiatives and provide an appropriate structure for understanding the perspectives of professionals involved in promoting agriculture via online communication tools.

This study integrated data from two qualitative sources: qualitative source-I (key informant interviews with professionals from urban agriculture initiatives), and qualitative source-II (selected social media accounts) to investigate the messages led by urban agriculture initiatives. Figure 2 illustrates the use of two qualitative sources by division of the communication interactions by initiated actors.

As shown in Fig. 2, online communication interactions within urban agriculture initiatives are primarily initiated by two types of actors: formal and informal. Formal actors include school-based and community-based urban agriculture initiatives, while informal actors consist of personal social media accounts. This focus on formal actors aims to address the growing pressure on institutions to respond to the demand for efficient agricultural and farming career knowledge-transfer to youth in the digital age. The studied formal actors are categorized into two groups: (i) school-based communication initiatives, which encompass urban agriculture sites operated by universities and high schools, and (ii) community-based communication initiatives, which include urban agriculture sites supported and operated by government agencies, agricultural extension networks, NGOs, and community gardens.

Qualitative source-I, key informant interviews

Key informant interviews ($N=28$; 15 from Pennsylvania, and 13 from Illinois) were conducted with professionals

from urban agriculture initiatives in and around the cities of Pennsylvania (Philadelphia, State College, Pittsburgh) and Illinois (Chicago, Champaign) between April and October 2022. The semi-structured, in-depth interviews, lasting between 40 and 90 min, were conducted by combined online and in-person meetings and were audio-recorded. The objective of the key informant interviews was twofold.

First, the study aimed to understand professionals' attitudes and values that shaped their interactions and behaviors on social media platforms and obtain their perspectives on social media engagements. Second, the study aimed to identify the relevant social media channel as a qualitative source.

Interviews were designed as open-ended questions to give a space for general discussion on the most consumed social media channels (at the time of the study) among individuals interested in urban agriculture. All interviewed professionals expressed their involvement in social media with different roles, such as a user for the content provider, content creator to promote urban farming for their affiliated institutions, or follower with or without professional identity.

Qualitative source-II, selected social media accounts

The results of key informant interviews guided the design of social media analyses. Social media analyses included the exploration of online text messages posted by formally organized actors from urban agriculture initiatives in Pennsylvania and Illinois. The study followed the purposive sampling strategy that included the selection of specific Instagram accounts for analysis. This strategy allowed an understanding of how different content setters communicate urban agriculture. The study is particularly interested in presenting urban farmers as a profession tied to pro-social and pro-environmental intentions and behaviors. Data sampling for the qualitative source-II followed three main steps.

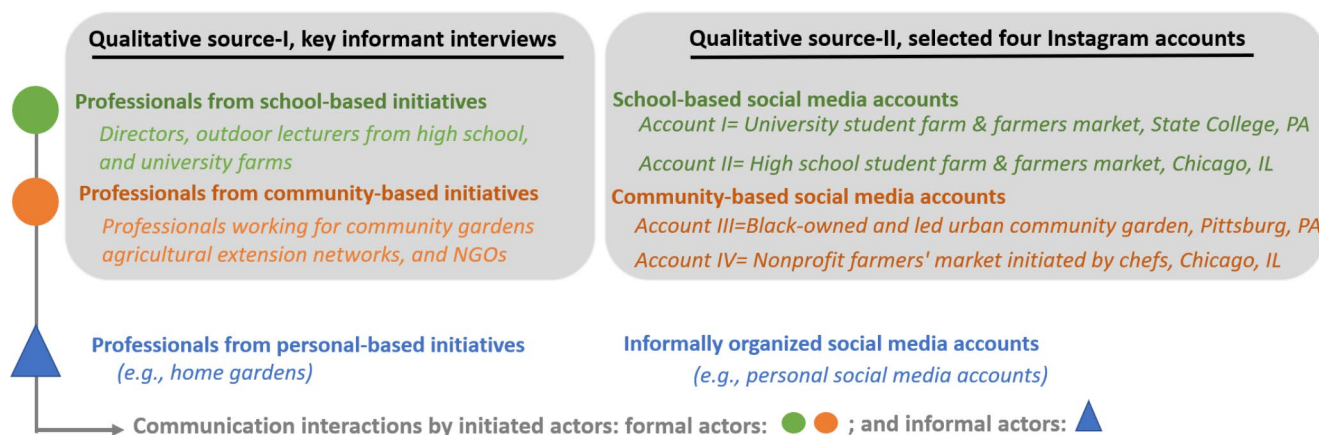


Fig. 2 Data and research design: illustration of used qualitative sources

First, we developed an inventory of social media channels managed by formal actors from urban agriculture initiatives. The list of online channels was drawn from a review of websites and social media accounts. Following key informant interviews and our inventory, we identified Instagram as a significant channel for our analysis. Besides web pages, urban agriculture initiatives were initially active on Instagram, Facebook, YouTube, and TikTok. The popularity of Instagram among young generations and the visually rich nature of agriculture and farming-related subjects (McGinnis et al. 2020) are assumed to foster the accessibility of online text messages.

Second, the list of urban agriculture initiatives included in the key informant interviews has been approached for selecting the target Instagram accounts for analysis. This approach provides a detailed commentary on the users' expressed attitudes and behaviors and enriches the analyses by knowing the insider view on the communication strategies of the studied accounts. The study chooses two Instagram accounts from each state by the characteristics of communication specialization (account managed by professional communication strategists as one of the main work tasks vs. accounts managed by the staff or leader as a beside job task) and by the initiated formal actor (account managed by a community-based actor vs. school-based actor). Following that, the target accounts were finalized with two eligibility criteria: i) active accounts that post a minimum of one per month and iii) accounts with more than 400 followers.

Third, we identified the study period by examining Instagram posts from January 2022 to January 2024. Rather than concentrating on major events, the analysis examines the dynamics of social media use over a three-year period. Because of the large volume of posts each year, the study avoids identifying a sample from a more extended time frame. The analyses considered the written messages as text messages in the posted images and short videos. Accounts that reside within a public domain are accessible freely.

Profiles of selected urban agriculture initiatives

Qualitative source-II consists of four Instagram accounts (Fig. 2) with varied numbers of followers (max~49000 to min~600). Account I (university farm, PA) and Account II (high school farm, IL) serve as agricultural production and marketing sites, as well as spaces for social interaction, educational development, and community involvement. Account III (community garden, PA) operates as an agricultural production and educational site, offering programs that promote community cohesion, entrepreneurship, nutrition, and well-being. Account IV (farmers market, IL), initiated by chefs, is driven by social and environmental objectives.

It promotes local farmers by enabling them to sell directly to consumers in the city, fosters relationships between producers and consumers, and encourages community engagement. Two of these accounts are working with social media strategists—either as interns or staff—to create and manage online content. The other two are developing and evaluating posts with existing employees who do not have professional backgrounds in media communication.

In total, a list of 1100 posts was analyzed. Instagram accounts posted regularly on their environmental, social, and political, economic concerns surrounding urban agriculture were studied. In all accounts, the number of posts was higher during the spring and summer seasons. Posts tied to urban agriculture had a vast spectrum of contents such as farming practices (e.g., production and marketing activities), sustainable social dinners, food pantry organizations, CSA announcements, culinary art events, meetings for book clubs, talks with urban farmers, chefs, writers, journalists, musicians, visual artists, summer school camps, onsite and offsite workshops, trips to urban farms, and entrepreneurship workshops.

Data analyses

This study used qualitative thematic analyses to identify, assess, and report themes using key informant interviews and selected four Instagram accounts.

For the qualitative source-I (key informant interviews), we investigated the lived experiences, focusing on professionals' online urban agriculture dialogue involvement. The descriptive coding approach was used to identify the main themes. Defined themes enable us to capture the engagement and management dimensions of online urban agriculture dialogue. The investigation mainly focused on how users led communication and made urban agriculture movement messages accessible to viewers.

Regarding qualitative source-II (selected four Instagram accounts), we start our analysis by re-examining corresponding informant interview(s) conducted with professionals from the selected four urban agriculture initiatives. This re-examination allows us to have account-specific insight from the user's perspective, such as users' opinions, engagement, management behaviors, and communication strategies. The re-examination of the corresponding interview provided insider knowledge and was used as an analytical basis. This basis helps to explore online text messages by considering the formal identity of the authority, the content (e.g., actuality in the photos and images) in which the messages were produced, and the way urban agriculture activities and urban farmers were presented to the viewers.

Fig. 3 Findings of two-steps qualitative thematic analyses: how do urban agriculture initiatives communicate on farming across society?. The provided summary results present the themes and sub-themes and are reported within the order of the two study questions. The sub-themes are bolded and italicized in the following manuscript for easy identification

Findings-I: Exploration via professionals' perspectives:

- **Social media engagement**
 - *urban agriculture outreach*
 - *particular dynamics of communication on farming*
- **Social media management**
 - *online presence as a work task*
 - *initiating an online urban food dialogue*
 - *portraying urban farmers online*

Findings-II: Exploration via Instagram messages:

- **Awareness messages**
 - *Awareness of consequences...*
 - *for one-self*
 - *for others*
 - *for the environment*
- **Responsibility messages**
 - *Self-responsibility*
 - *Civic responsibility*
 - *Professional responsibility*
- **Pride messages**
 - *The emotion of pride*
 - *Personal achievements*
 - *Relational achievements*
 - *Professional achievements (farming-career achievements)*

The coding process included an initial reading of the messages by viewing posted images and short videos. After an initial read, a second reading classified each message with the guidance of the Norm Activation Model with three aggregated themes: (I) Awareness of consequences messages, (II) Responsibility messages, and (III) Pride messages. The data structure was finalized in the final reading phase to reflect our results, and detailed in the following section in Table 1.

Findings

The study findings first provide the professionals' perspectives on engaging and managing urban agriculture dialogue in social media. We then deliver the findings of social media analyses, in which the study investigates the online messages led by four urban agriculture initiatives. Figure 3 provides the list of codes with two themes.

Findings-I: Exploration via professionals' perspectives

Social media engagement

Professionals working to support or promote urban farming initiatives via social media have similar opinions on the importance of social media channels as an “*urban agriculture outreach*.” Professionals report that social media and word-of-mouth play equally important roles as the main channels for our outreach efforts. The importance of both formally and informally managed social media accounts in raising awareness is widely acknowledged. Besides web pages, blogs, Facebook, and YouTube, many professionals emphasize the importance of Instagram. Instagram highlights urban agriculture by showcasing urban farmers and promoting initiatives and events related to urban farming through text messages, images, and short videos. The following quotes, shared by Professional 3 and Professional

2 from community-based and university-based urban agriculture initiatives in Pennsylvania, illustrate the case for providing visibility to urban agriculture initiatives through social media channels:

Instagram and word-of-mouth are our two most important channels to reach those outreaches (urban agriculture initiatives)

I'd say maybe 40% or so reach us by web searches... or they're finding us with social media channels... Our farmer members are referring people into our programs.

Many respondents express a shared belief in the particular dynamics that play a role in fostering social media engagement on urban agriculture issues. The expressed “*particular dynamics of communication on farming*” refers to doing online dialogue on farming very carefully due to the audience profile in cities. This particularity involves the challenge of tailoring farming discussions to resonate with young urban demographics, which differ from rural youth audiences who likely have existing connections with farmers. Professionals have identified several effective social media communication strategies that enhance engagement: (i) sharing success stories of prominent role models who have made significant contributions to the farming community; (ii) proactively engaging with comments and fostering organic content through conversational tones; and (iii) sharing insights into the emotions and experiences of interns or staff involved in apprenticeship programs, as demonstrated by Professional 1 from a community-based urban farm in Chicago.

We have had more apprentices through the years, highlighting their experiences through social media. The written interview posts where we sort of talk through their experience, motivations, and goals... We found that just getting the documentation of photos of

apprentices on farms really increases the amount of engagement that we get for.

Social media management

Three key sub-themes are notable in how professionals from urban agriculture initiatives frame social media management.

First, “*online presence as a work task*” refers to three main challenges in social media management with professional identities. It is summarized as follows: (i) The first challenge is related to the workload. Our sample is divided into two groups of professionals: those who create social media content while multitasking and those who manage online presence through collaboration with internal or external professionals, such as media coordinators and graphic designers. For both groups, establishing an online presence requires internal dialogue among team members to develop authentic and transparent content, which in turn demands a significant investment of time; (ii) the second challenge concerning online presence requires a professional understanding of how to customize messages for each platform (e.g., to adapt the tone and target audience when sharing specific content). Respondents generally consider Instagram for young age groups (referred to as 18 to 35) relative to Facebook (30 to 70 age range); and (iii) the third challenge emphasizes the need for consistency, interactivity, and collaboration with other accounts, as well as the promotion of events through media placements.

Second, “*initiating an online urban food dialogue*” highlights the challenges of online communication faced by urban growers who are trying to promote a healthy diet—a goal that necessitates both time and awareness. Respondents noted that creating engaging online discussions about urban food is particularly difficult in cities for two main reasons: (i) first, the overwhelming presence of major fast-food brands, such as McDonald’s, both online and offline, makes it challenging to inspire children and teenagers to participate in conversations about healthy, fresh, and local food; and (ii) second, the urban lifestyle contributes to a perception that food should be inexpensive and easily accessible, as described by Professional 29 from a university-based urban agriculture initiative in Chicago.

[For the food], we are concerned about convenience and service. If it’s not easy and cheap, then you lose the attention.

Third, “*portraying urban farmers online*” highlights the challenges of representing urban farmers on social media, which differs from how traditional farmers are depicted in conventional media. The expressed challenges associated

with portraying urban farmers can be summarized as follows: (i) the first challenge involves the different methods and understanding of farming practiced in cities, often on small plots of land, and the need for a critical view of industrial agricultural production. As a result, portraying urban farmers must emphasize messages that promote a way of viewing economic activity in terms of its moral, rather than material, aspects; (ii) the second challenge involves addressing the official recognition issues faced by small-scale urban farmers, which can both contribute to and hinder the acknowledgment of urban farms available online. Professionals highlighted the difficulties in tracking small urban farms through agricultural census data, as these farms are not included in current statistics; and (iii) the third challenge pertains to personal recognition of urban farmers with the faces of diversity in terms of race, gender, and ethnicity, particularly in contrast to traditional portrayals of large-scale farmers. This was illustrated by Professional 19 from a school-based urban agriculture initiative in Chicago.

If I were to ask students to picture a farmer, they would picture probably a white man with a pitchfork and straw. that is so different in urban areas...It’s harder to imagine a small farmer because you have to compete with these major conglomerates.

Findings-II: exploration via Instagram messages

The second part of the findings section gives insights into how urban agriculture initiatives use social media, focusing on three main themes in their online messages. The first theme concerns awareness, the second centers on responsibility, and the third demonstrates how urban agriculture initiatives incorporate pride messages. Table 1 provides used themes and sub-themes with descriptions.

Awareness of consequences messages

In Instagram posts, messages containing awareness of consequences have a moderate presence.

Posts that convey messages about the “*awareness of consequences for oneself*” focus primarily on promoting healthy behaviors. They highlight the benefits of adopting a healthy diet, which includes consuming organic, fresh, and nutrient-dense foods sourced from urban farmers. These posts often end with a call to action, encouraging support for urban agriculture initiatives and urban farmers’ markets, as illustrated in the quote below:

Did you know that microgreens can be up to 40 times more nutrition-dense than their adult counterparts?

Learn about mega benefits of microgreen and stop by...(farm/market).

Posts that raise “*awareness of consequences for others*” often suggest opportunities for donations aimed at addressing food insecurity. They focus on mobilizing resources, leveraging digital platforms, and engaging communities to support individuals in need. These posts provide essential facts to inform people about the impact of their actions, as illustrated in the following quote:

Double your impact on neighbors facing hunger when you donate... 1 in 6 in Chicagoan and nearly 1 in 4 families with children in Chicago are currently facing hunger.

Posts that include “*awareness of consequences for the environment*” messages often motivate pro-social and pro-environmental initiations. For example, messages on the consequences of consuming animal products wisely—in terms of quantity and type of vendor—to decrease the raised animals that wind up in a landfill or consequences of performing composting for lower-level food waste in society. A quote illustrates this kind of online text message quite clearly:

Composting is a great way to reduce food waste. When you compost, you allow certain food scraps and other waste to degrade and change naturally....

Responsibility messages

Messages that convey a sense of responsibility for the outcomes of personal, civic, and professional obligations are common and highly present on Instagram. While posts that feature “*self-responsibility*” messages may not be as frequent, they are significant in structure and word choice. These posts typically present specific behaviors using active voice and simple language, encouraging deeper reflection on self-responsibilities. In contrast to messages that raise “*awareness of consequences for oneself*,” which primarily promote healthy behaviors, “*self-responsibility*” messages often highlight engagement in responsible pro-social actions. The following quotes illustrate this point:

Sustainability is not about driving expensive electric cars. It’s about making life choices daily basis.

The messages about “*civic responsibility*” encourage active participation in urban agriculture initiatives to improve the community’s quality of life. Civic involvement in urban agriculture initiatives can take many forms. Individuals can

donate to food assistance programs aimed at low-income individuals, such as the Supplemental Nutrition Assistance Program (SNAP). Other ways to get involved include subscribing to a CSA program, participating in social and educational activities like community dinners, concerts, and chef demonstrations, volunteering at local food pantries and food banks, and supporting urban farmers, especially during the winter months as a consumer, which the quotes below show:

You are the patrons of local farmers during winter sales.

Posts with “*professional responsibility*” messages are a typical communication style used among the studied urban agriculture initiatives. These messages communicate the good qualities of an urban farming profession, often connecting with the updated skills and capacities of urban farmers and their timely decisions for the environment and society. We also find a connection to urban farmers’ portrayals as social personalities centered around highly connective and inclusive networks. For example, the “*professional responsibility*” messages include urban farming as a value, with professionals working to reduce emissions, expand access to clean energy, use less water and fewer pesticides, and do soil testing and classification.

Even though we found tentative support for the “*professional responsibility*” messages that discuss the qualities of urban agriculture initiatives upon conventional food initiatives, the frequency of such comparative messages (sustainably raised vs. factory farms) was very high in certain Instagram accounts. This indicates a consistent effort to emphasize the sustainable and moral aspects of urban agriculture in contrast to traditional agricultural practices. Here is an example of such a comparison message:

Did you know synthetic fertilizers used at factory farms release a greenhouse gas 300x more potent than CO₂? In response, our sustainable, local farmers are working directly to reduce emissions.

The emotion of pride

Expressions of pride commonly appear in the Instagram posts examined, encompassing feelings of accomplishment, success, achievement, self-worth, confidence, and productive efforts. Pride is a distinct and recognizable emotion that can be identified by a wide range of audiences, including different age groups, such as teenagers and adults, as well as people from various socioeconomic backgrounds, including differences in income, education, and occupation. This broad recognition is partly due to the inclusive content of

the posts, which often feature families, refugees, and diverse genders, races, cultures, and marginalized groups. This inclusive approach lets it quickly identify and resonate with the targeted audience. Two quotes illustrate these messages:

We are proud to support Chicago Chefs Cook for Ukraine. All proceeds will be donated directly to wckitchen's efforts on the ground providing meals to Ukrainian refugees.

We are proud to work alongside leaders like (...) to build a more local, sustainable, and equitable food system through farmers' markets and a holistic set of complementary programs.

What types of achievements elicited pride in urban agriculture? Our findings indicate that pride messages primarily stem from “*professional achievements*.” In contrast, “personal achievements” were less frequently associated with pride messages, suggesting that urban agriculture initiatives focus predominantly on professional accomplishments when sharing events they take pride in. Personal achievements are acknowledged but to a lesser extent. The pride messages centered around professional achievements (e.g., successfully implemented projects or having a quality of production, achievements in the initiatives of “what you can pay,” and “voucher-giving” to low-income families) explicitly express the role of urban agriculture initiatives in society with facts, feelings, and thoughts:

Doing good for the planet and your community does not conflict with running a successful business.

Posts that include pride messages about “*personal achievements*” clearly connect to personal and professional values, as well as the skills gained through participation in educational programs organized by urban agriculture initiatives. Examples of these skills include farming and gardening abilities, managing an agribusiness, and understanding the principles of eco-friendly farm design. Additionally, there is a link to career communications in messages that emphasize an individual's value in specific careers, as illustrated by the quote below:

Urban Farm Academy, creating a more just and equitable food system by training up the next generation of aspiring urban farmers through experimental training in sustainable farming practices, and mentorship.

What types of “farming-career achievements” elicited pride? The study found very little evidence of messages that express pride in pursuing a full-time career in farming

with clear intentions and goals. The posts we studied rarely featured messages providing financial advice, such as guidance on agri-entrepreneurship, sharing financial reports, or explaining economic concepts related to urban farming. Messages related to the integration of agriculture into urban planning and policies were seldom represented.

Instead of explicitly focusing on achievements in a farming career, these posts serve as platforms for showcasing various career opportunities. They highlight diverse professions, including urban farmers, writers, chefs, journalists, educators in farming and food, and plant and food scientists. The posts also announce and report on events such as workshops on farming, cooking, summer schools, field trips to urban farms, and organized dinners featuring speakers from diverse careers. Instagram posts primarily showcase career achievements in the sustainable sector, including extension staff in urban farming, agribusinesses focusing on soil health improvement, and personnel engaged in equitable food distribution. This falls within the agriculture, food, and natural resources career cluster, which is broader than just a career in farming, as illustrated in the following quote:

We are beyond proud of them (urban farming interns) for their award-winning projects in the categories of Animal Science, Ag Education, Horticulture, Food Products, and more.

Exploring narrative styles in “farming-career achievements” messages Posts that communicate career achievements in farming often utilize two narrative styles. The first is a descriptive style that includes text-based explanations to complement the visual images shared. This explanatory narrative typically highlights how urban agriculture initiatives have positively influenced personal and career skills, values, and morals in daily life and current jobs. While images and short videos help to establish the context in terms of time and place, the descriptive narrative effectively conveys a sense of pride through the use of figurative language, such as similes and metaphors. For instance, it may describe feelings of pride using vivid imagery, as demonstrated in the following example:

There are two spiritual dangers in not owning a farm. One is the danger of supposing that breakfast comes from the grocery, and that heat comes from the furnace.

The second narrative style is a viewpoint approach that lets the audience explore the career development paths of successful professionals from the perspective of a narrator. This style can utilize either a first-person or third-person point of view and highlight the career journeys of individuals from

both broader and closer networks. For instance, an Instagram feed can showcase both national and local professionals, such as accomplished leaders and scientists in the agricultural sector, as well as award-winning local figures from urban gastronomy, schools, and hospitals who collaborate with urban farmers. Additionally, the posts feature individuals from a more specific network, including students, interns, volunteers, alumni, and new staff members who have found success in sustainability sectors due to their past achievements in urban farming. These posts share their career experiences through short interviews or quotes from discussions, capturing the thoughts, emotions, and stories of individuals in various careers. These insights highlight the value of individuals in specific social statuses and professions. One example is an alumnus from the university's urban agriculture initiative.

Student Farm prepared me for so much in starting a business. Firstly, it taught me how to teach other people farming and gardening skills...Additionally, it helped me shape the values of the company, an ecological design company where we focus on soil health and a healthy ecosystem.

Discussion and conclusion

This research explores agricultural communication by urban agriculture initiatives in social media within two methodological approaches: assessing the perspective of the professionals from urban agriculture initiatives in Pennsylvania and Illinois and examining four Instagram accounts to extract insights and patterns from user-led messages. Including two approaches enabled us to explore different perspectives and comprehensively evaluate selected Instagram accounts with background knowledge from their users. In both methods, the study applied qualitative thematic coding in which the aggregate theoretical dimensions are built by the Polymedia theory, which defines social media with an integrated structure, and the Norm Activation Model that explains the pro-social and pro-environmental behaviors with awareness of consequences, responsibility, and personal norms.

This study argues that social media accounts can be crucial cultural imagery that reflects the portrayals of urban farmers within the social and cultural trends. The user-led messages in social media accounts provide insights into how urban agriculture initiatives are framed and by which tones and contribute to understanding the role of the urban agriculture initiatives in shaping public perceptions toward various professions, impacting their social image and reputation. In our study, we contribute to the literature on the generational turnover problem of farms and misconceptions

about agricultural careers by examining the issue from the perspective of agricultural communication within society. Specifically, we analyze the narratives surrounding farming career achievements and the styles in which these stories are told. The study findings are discussed, and the findings conclude within the following two sub-sections.

Agricultural communication on social media: challenges & potentials

The findings, which document the professionals' perspectives, reveal four key discussion points regarding the challenges and potentials of agricultural communication on social media by urban agriculture initiatives.

First, the findings show that social media and word-of-mouth are equally important channels for promoting urban agriculture initiatives. Respondents emphasize the need for careful online dialogue tailored to urban audiences, particularly young city dwellers who differ from rural youth with existing connections to farming. A list of strategies to increase social media engagement includes sharing success stories from influential role models in the agriculture sector, actively engaging with comments, and showcasing the emotions and experiences of interns or staff involved in urban farming initiatives. These social media engagement patterns align with previous studies and confirm the complex nature of online dialogue engagement that arises from relationships built through purposeful interactions around shared needs (Unay-Gailhard et al. 2023).

Second, our findings highlight that urban agriculture initiatives often utilize social media without internal or external digital communication professionals but practice online presence as multitasking. In our research, professionals identified several challenges related to social media management. These challenges primarily included the time demands of creating organic content and the need to multitask while maintaining an online presence. Similar challenges have also been noted in research on agricultural communication by Lubelle and McRobert (2018). Consistent with previous research on online civic engagement (Chaskin et al. 2018; Coleman, 2018), interviewed professionals view social media accounts as crucial for reaching out to individuals, especially young people.

Third, the insights from professionals indicate that fostering an online urban food dialogue is challenging due to the dominance of fast-food brands and the urban lifestyle's attitude towards cheap, easily accessible food. It is emphasized that online urban food dialogue can encourage individuals to engage in conversations about healthy eating and critically evaluate their knowledge of industrial agriculture. These findings contribute to the growing literature on making online food policy messages more accessible for

promoting healthier eating and environmentally friendly food consumption (Bendz et al. 2023). In that respect, study results highlight the importance of knowing why people accept or oppose framed content on urban food and farming issues.

Fourth, professionals' insights suggest that portraying urban farmers on social media enhances public perception and contributes to the personal recognition of farmers, showcasing their diversity of race, gender, ethnicity, and different farm size. This aligns with previous studies that noted urban agriculture engagement could break down misconceptions about the farming profession (Fontaine et al., 2019; Pierce et al. 2017; Weissman 2015). Our research expands existing knowledge by looking at the dimension of online agricultural communication.

Agricultural communication on social media: awareness, responsibility, and pride messages

As noted by Bruce (2019), the portrayals of farmers in the media are transforming significantly. Likewise, scholars note the considerable role of the internet in transmitting cultural imaginary by opposing the industrial food system with an underlying tone of "*moral superiority*." (Press and Arnould 2011). This research contributes to both studies and explores how urban agriculture issues are framed and which messages in digital media. Overall, analyzing social media data on agricultural communication reveals five insightful discussion points.

First, our analysis reveals that messages communicating a sense of responsibility and pride are typical and highly present in Instagram posts. However, messages containing awareness of consequences have a moderate presence. Pride messages—whether related to personal, relational, or professional achievements—play a significant role in shaping storytelling and expressing primary "professional achievements." This finding aligns with the study by Press and Arnould (2011), which discusses how the development of the internet has contributed to the legitimacy of Community Supported Agriculture (CSA) programs as a market form. The legitimacy of CSA programs enhances the perception of "*moral superiority*" associated with local, small-scale, and ecological farming methods, where choices are rooted in a moral discourse.

Our study found that pride messages evolved to serve a specific communication style that conveys career success and promotes social status within sustainable sectors. In such a socially valued success within the networking perspective, pride messages promote an individual's network acceptance. Pride messages for career achievements may boost self-esteem and communicate to the audience with a silent message that "Your pro-social and pro-environmental

intentions and behaviors may also merit such a socially valued status in your career." Pride messages for farming-career achievements allow the followers to reflect on the self-representation of the profession and the evaluation of the profession compared with the social, cultural, and political era.

Second, study findings confirm that Instagram accounts managed by urban agriculture initiatives do not explicitly focus on farming careers; however, they serve as platforms for showcasing various careers, particularly in sustainability sectors. This aligns with the study by Unay-Gailhard and Brennan (2022), which suggests that discussions about farming careers receive inadequate attention on social media and could be better incorporated into agricultural communication content.

The presence of diverse career opportunities in Instagram accounts of urban agriculture initiatives is closely linked to the connectedness of urban farms. Urban agriculture movement relates to agri-food processing and distribution, incorporating initiatives such as farmers' markets, food cooperatives, and programs to promote sustainable food production, distribution, and consumption within urban areas (Das and Ramaswami 2022). This connectedness creates a broader sustainable network that offers diverse career opportunities. These opportunities span various initiatives, including farm-to-restaurant, farm-to-chef, garden-to-café, and food-to-school linkages.

Third, our findings contribute to the existing literature on farmers' markets as an actor in urban agriculture initiatives, which shows a growing pattern in recent decades (Garner 2018; Metz and Scherer 2022). As documented by previous studies, farmers' markets have been criticized for their inaccessibility by the general population due to a lack of connection with marginalized communities (Alkon and McCullen 2011; Guthman 2011; Leslie and White 2018; Specht et al. 2014). This inaccessibility includes factors such as farmer's market location, variety of food items, quality, and price. Our analyses, which include an Instagram account of a farmers' market, show a notably higher number of "relational achievement" and "professional achievements" messages with their successful initiatives for low-income families (e.g., initiatives of "what you can pay," and "voucher-giving"). This finding offers a positive perspective that counters the argument about the inaccessibility of urban food to marginalized communities and highlights the agricultural communication efforts addressing this issue.

Finally, our analysis did not reveal strong support for messages regarding the economic potential of urban agriculture. This suggests that financial issues and access to resources, particularly access to capital and land, are not prioritized in Instagram content creation. This finding is consistent with the study by Rangarajan and Riordan (2019)

that investigates the commercial viability of urban farms in 13 U.S. cities. From the experience of commercial-scale urban farms, the authors highlight the importance of increasing awareness and understanding of the resources available for economically viable urban farms.

To effectively address the need for information, we assert that messages showcasing the benefits of urban agriculture for economic development, alongside its contributions to social and environmental well-being, will enhance the fragmented narrative surrounding self-sufficient economic initiatives on social media. These messages could better represent available resources such as University Extension resources regarding personnel and programs, awareness on expended urban agriculture operations, updated regulatory information in urban planning, funds to implement ecological practices, and the latest information on urban farming policies.

As a concluding remark, we emphasize the limitations of our study. This research relies on predefined analytical frameworks, where established theories inform the coding of qualitative analyses. Our approach allows data connection that enhances understanding with the explanatory power of used theories. Although we deliberately implemented several steps in the coding process, we recognize that different coding methods could provide new opportunities for analytic syntheses.

This study explores the dialogues generated by urban agriculture initiatives through qualitative research, utilizing data from Instagram and interviews with professionals in the field. It presents opportunities for future exploration, particularly regarding online dialogue engagement. By examining the conversations that foster engagement among followers, we can investigate the information needs of individuals interested in farming and the impact of social media on career aspirations. This can be captured by listening to the career stories of beginning urban farmers in urban and peri-urban areas and by analyzing online dialogue engagement qualitatively and quantitatively.

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