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Real, Illustrated, or Cartooned? How Image Style Shapes Perceptions of Farmers' Source Credibility

Abstract

In increasingly visual digital environments, image design plays a strategic role in agricultural communication. This study examined how image style (photograph, AI-generated illustration, or AI-generated cartoon) affects U.S. consumer perceptions of a farmer's credibility, guided by source credibility theory. A quasi-experimental design ($N = 492$) randomly assigned participants to view one of three image types depicting the same farmer in a crop field. Respondents rated the farmer's credibility using an 18-item semantic differential scale and then selected their preferred image type to represent a farmer. Results from an ANOVA revealed no statistically significant differences in credibility ratings across image types, although all were rated slightly positive. Despite similar credibility scores, the photograph was overwhelmingly preferred ($n = 410$), followed by the AI-generated illustration ($n = 43$) and AI-generated cartoon ($n = 39$). Open-ended responses highlighted distinct rationales for each image choice: photographs were viewed as realistic, relatable, and high quality; illustrations were seen as a creative yet grounded compromise; cartoons were valued for their demographic ambiguity and inclusivity. Findings suggest while image style may not drastically alter perceived credibility, audience preferences strongly favor realism. However, stylized visuals may serve specific roles in youth outreach, inclusive messaging, or aesthetic engagement. This study underscores the importance of matching visual style to communication goals and audiences. Future research should explore emerging formats, including AI-generated imagery and short-form video, and consider how demographic factors moderate responses to visual style. Understanding how imagery shapes trust in agriculture remains critical for effective communication.

Keywords

visual communication, image style, source credibility, consumer perception

Cover Page Footnote/Acknowledgements

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Introduction

What does a farmer look like? For many consumers, the answer comes not from personal experience, but from carefully curated images on food packaging, marketing campaigns, or across social media feeds (Robinson, 2022; Sanders et al., 2021). In this increasingly visual landscape, image design is not just an artistic choice, it is a strategic one. As Preininger (2023) stated, images in agricultural media are rarely neutral; rather, they serve as instruments of imagination and persuasion, embedding future-oriented narratives and shaping public expectations of farming. These portrayals shape how people understand farming, assess credibility, and make decisions about food and agricultural policy (Newman & Schwarz, 2024; Preininger, 2023; Tolbert & Rutherford, 2009).

In an era where consumers are increasingly distanced from the origins of their food, visual representations have become powerful tools in shaping public understanding of agriculture (Locke et al., 2023; Rice et al., 2016; Tonsor & Olynk, 2011). Images are not simply decorative, they are persuasive instruments that direct attention, influence interpretation, and impact memory (Newman & Schwarz, 2024). As more than 3 billion images are uploaded online each day, platforms saturated with visual content increasingly dominate the way people consume and share information (Newman & Schwarz, 2024). Despite this, much of the research on misinformation and public understanding has overlooked the significant role that visual stimuli play in framing beliefs and judgments (Newman & Schwarz, 2024). When agricultural imagery fails to align with consumers' expectations or prior experiences, it can trigger cognitive dissonance and confusion (Rumble et al., 2014), potentially eroding trust in both the messenger and the message. This disconnect underscores the need for communicators to critically examine how image style, whether realistic or stylized, affects public perception of farming and farmers.

Despite the widespread use of imagery in agricultural communication, little is known about how different visual styles—such as photographs, artificial intelligence (AI)–generated illustrations, or AI-generated cartoons—shape perceived source credibility of farmers themselves. In this study, stylized visuals refer to representations that are simplified, exaggerated, or otherwise altered using AI from realistic depictions to achieve a specific artistic effect. Most existing research has focused on message framing, textual content, or branding elements, leaving a gap in our understanding of how the visual presentation of a communicator, independent of message content, influences credibility judgments (Haller et al., 2019; Newman & Schwarz, 2024; Stollar et al., 2024). This gap becomes increasingly relevant as concerns about manipulated or AI-generated imagery grow; research has shown that even decorative or semantically related images, regardless of accuracy, can influence perceived credibility (Newman & Schwarz, 2024).

Because individuals frequently encounter images of farmers in digital environments without accompanying narrative or explanatory context, credibility assessments often occur as rapid, visually driven first impressions rather than as evaluations of a fully articulated message (Newman & Schwarz, 2024; Schill, 2012). Understanding how image style shapes these initial credibility judgments is especially important in agriculture, where trust in producers remains central to public confidence in food and farming systems. In particular, the growing use of AI-

generated visuals in agricultural storytelling demands greater clarity on how design decisions influence credibility, trust, and audience perceptions.

Accordingly, this study examines how consumers evaluate the perceived source credibility of a farmer based on image type and explores which visual style they prefer to represent farmers in communication contexts.

Literature Review

Traditional Depictions of Agriculture

Historically, agriculture has been visually represented through symbolic and often romanticized imagery. One of the most enduring examples is *American Gothic* (1930) by Grant Wood, which depicts a stoic farmer and his daughter standing in front of a rural home (Rumble et al., 2014). Though painted nearly a century ago, this image continues to shape public perceptions of American farming, evoking ideas of simplicity, labor, and tradition (Rumble et al., 2014). These depictions reflect a cultural nostalgia for a time when agriculture was small-scale, family-centered, and labor-intensive. However, the reality of 21st-century agriculture is markedly different. Technological advancements have transformed the industry into a highly specialized and mechanized sector, employing precision technologies, data analytics, and automated systems (Abriri et al., 2023; Rumble et al., 2014). Despite these shifts, public perceptions often lag behind. This disconnect can be attributed in part to the growing generational distance from first-hand agriculture experience (Tolbert & Rutherford, 2009) and the persistence of stereotypical portrayals in media and marketing (Rhoades & Irani, 2008; Rumble et al., 2014).

Even as farming has evolved, so too have the visual narratives associated with its future. As Preininger (2023) observed, popular media representations often portray technologically advanced, digitally integrated agricultural systems, many of which echo the speculative illustrations of the 1950s. These futuristic visuals emphasize automation, robotics, and big data, projecting a utopian vision of agricultural progress. While these depictions reflect real trends in agricultural innovation, they are not free of ideological framing. Media representations of agricultural technology tend to focus on efficiency and innovation, often omitting complexities such as environmental trade-offs, labor displacement, or equity concerns (Preininger, 2023). As such, both nostalgic and futuristic images contribute to a distorted or incomplete understanding of agriculture (Preininger, 2023). In the context of this study, understanding the legacy and impact of traditional and stylized portrayals helps frame the importance of examining how image style affects perceptions of farmers and their credibility.

Images, Credibility, and the Role of Stylized Visuals

Images are powerful communication tools that shape attention, memory, and meaning. Research in visual cognition and media psychology has demonstrated that messages accompanied by images not only attract more attention (Marquart, 2023; Newman & Schwarz, 2024) but also increase message recall, believability, and likelihood of sharing (Cases & Williams, 2019; Li & Xie, 2020; Newman & Schwarz, 2024). In digital environments, where platform algorithms prioritize image-rich content based on emotionality, negativity, and visual appeal, images help determine what messages gain visibility and traction (Geise et al., 2021;

Newman & Schwarz, 2024). These dynamics amplify both credible and misleading messages, shaping the “information diet” consumers encounter online (Newman & Schwarz, 2024).

Photographs have long occupied a distinct position in visual communication due to their perceived relationship with reality. Barthes (1980) described photography as uniquely indexical, emphasizing that photographs attest to the existence of what they depict—what he termed the “that-has-been.” Unlike drawings or illustrations, photographs maintain a material connection to reality, which distinguishes them from other visual forms. Similarly, Sontag (1973) noted that photographs are commonly treated as records of reality and often granted cultural authority as documentary representations, even as she cautioned that they are shaped by framing, selection, and repetition. Building on this foundation, DeLuca and Demo (2000) argued that photographs function rhetorically by structuring how audiences interpret and evaluate meaning in public discourse. Together, this scholarship suggests that photographic images may carry assumptions of realism and authority that shape how individuals assess the people depicted within them, an important consideration when examining visually based perceptions of source credibility.

However, even realistic and transparent images are not universally persuasive. Busch and Spiller (2018) found that while photographs of modern livestock farming can improve transparency and help bridge the gap between perception and reality, they do not necessarily lead to greater acceptance. In some cases, images that accurately depict contentious practices reinforce existing concerns by activating deeply held beliefs and values.

As digital media evolve, the line between realism and fabrication becomes increasingly blurred. The rise of fauxtography, deepfakes, and AI-generated visuals complicates viewers’ assumptions about authenticity. Even decorative or semantically related images (i.e., those not intended as factual evidence) can increase message believability and induce false memories (Newman & Schwarz, 2024). This phenomenon, known as the truthiness effect, occurs when non-probative images facilitate semantic processing, leading viewers to rate a claim as more believable even when the image has no evidentiary value (Cardwell et al., 2017; Newman et al., 2012; Smelter & Calvillo, 2020). For example, merely placing a celebrity’s image next to a fabricated statement about their death or survival can increase perceived accuracy. Decorative visuals may also inflate confidence in one’s understanding of complex topics (Jordan et al., 2022), subtly shaping perceptions of expertise and truth.

While photographs may maintain an evidentiary aura, other image types, such as AI-generated visuals, are increasingly used in agricultural and science communication (Reyes, 2024). Stylized visuals offer unique communicative advantages. Rodríguez Estrada and Davis (2015) contend that illustrations and infographics, when designed with the user in mind, can foster engagement, simplify complexity, and resonate emotionally—particularly for younger or visually oriented audiences. These formats, however, may shift perceived source credibility depending on context. While illustrations can enhance emotional appeal and accessibility, they may also be perceived as less authoritative in settings where scientific rigor is expected. This tension underscores the importance of visual context in credibility judgments—a farmer presented in an AI-generated cartoon may evoke approachability but lack perceived expertise or trustworthiness compared to a photograph.

Finally, as AI-generated imagery becomes more prevalent, concerns about visual credibility deepen. Newman and Schwarz (2024) caution that AI visuals—even when disclosed as synthetic—can still increase perceived accuracy, highlighting a need for new visual literacy frameworks. In agricultural communication, where public trust is essential and misinformation can spread rapidly, understanding how different visual styles shape perceptions of trust, expertise, and goodwill is vital. Communicators must navigate an increasingly visual landscape where authenticity is not just a matter of content, but of form.

Theoretical Framework

The implications of visual communication are particularly important in agriculture, where trust remains a central concern. According to the Center for Food Integrity (2017), only one in four United States consumers strongly agree that they trust today's food system. In this context, understanding how different forms of communication, especially visuals, influence trust and credibility is critical for effectively engaging the public on agricultural and food-related issues.

Source Credibility Theory

One major factor influencing how much people trust information is the perceived credibility of the source, which refers to the person or entity believed to be delivering the message (Brewer & Ley, 2012). Source credibility theory, originally proposed by Hovland et al. (1953), offers a framework for analyzing how individuals evaluate message senders, particularly in contexts where trust and expertise are paramount. The theory identifies three core dimensions of credibility: expertise, trustworthiness, and goodwill (Hovland et al., 1953; McCroskey & Teven, 1999). Expertise refers to the perceived competence and qualifications of a source (McCroskey, 1966), trustworthiness reflects perceptions of honesty and integrity (Giffin, 1967), and goodwill represents the extent to which the communicator is perceived as having the audience's best interests at heart (McCroskey & Teven, 1999).

In this study, we apply source credibility theory to visual perception, conceptualizing perceived source credibility as participants' first impressions of the farmer depicted in an image. We are not measuring the credibility of the image itself (e.g., realism, manipulation, or production quality), nor are we assessing the credibility of any accompanying message or broader narrative. Instead, we isolate the farmer as the visual source, and credibility is evaluated solely on how trustworthy, competent, and caring the farmer appears to viewers based on visual cues alone. This distinction ensures theoretical clarity and avoids conflating image authenticity with source credibility.

Source credibility theory has been widely applied in agricultural and food system research (Bigham et al., 2019; Lamm et al., 2016; Zagonel et al., 2021), where findings consistently show that the credibility of the information source significantly influences consumer trust. For instance, Lamm et al. (2016) found that messages about agricultural water use were more trusted when they came from representatives of regulatory agencies, educational institutions, environmental organizations, or agricultural producers. Similarly, consumers often report the highest levels of trust in farmers when receiving information about food safety or

emerging food technologies, likely because many feel disconnected from the origins of their food and seek authentic connections with producers (Henderson et al., 2020; Kneafsey et al., 2008).

However, this trust does not always translate across communication channels. Ruprecht et al. (2020) found that although U.S. consumers generally expressed high trust in producers, they reported lower trust in farmers' faces on food packaging, perhaps due to confusion surrounding food labeling (Tonkin et al., 2016). While farmers are sometimes subject to negative media portrayals (Chowdhury et al., 2023; Stroud, 2019), they are typically seen as credible because of their perceived firsthand knowledge and lived experience (Soubry, 2020). Moreover, visual portrayals of farmers can influence perceived credibility. For example, Karduni et al. (2021) and McCroskey and Teven (1999) found that nonverbal cues such as smiling, and emotional engagement enhance trustworthiness and likability. As such, strategically depicting farmers in visually positive ways may serve as a powerful tool for boosting source credibility in agri-food communication.

Building on this framework, scholars have begun to explore how visuals themselves shape source credibility judgments. Visuals are a dominant form of communication across digital platforms and can serve numerous purposes—from conveying political identity and advertising products to simplifying scientific information (Churchill et al., 2003; Lipkus & Hollands, 1999; Mahmood et al., 2019; Schill, 2012). Features like layout quality, aesthetic appeal, color schemes, and image composition have been found to influence perceived credibility online (Jung et al., 2018; Lowry et al., 2008; Zagonel et al., 2021). However, few studies have directly compared image types, such as photographs, AI-generated illustrations, or AI-generated cartoons, in terms of their influence on the perceived credibility of the person depicted.

Peng et al. (2023) offer a relevant framework by distinguishing between objective image features (e.g., color, composition, facial expressions) and perceived features (e.g., emotional tone, visual professionalism, or appropriateness). These perceived features are shaped by viewer psychology and can influence how credible a visual source appears. Particularly relevant are nonverbal cues (like smiling) and contextual elements (such as background and clothing), which can enhance or detract from judgments of trustworthiness or expertise.

Rodríguez and Lin (2016) found that although cartoons and illustrations can improve learning and attention, they are often perceived as less credible than photographs, because photographs are still widely associated with realism and objectivity (Switzer, 2018). Nonetheless, stylized visuals are increasingly used in science communication to engage audiences, simplify complex topics, and appeal to younger or more diverse viewers (Segel & Heer, 2010; Zhu et al., 2021).

This study applies source credibility theory to visual media by investigating how visual style, specifically photographs, AI-generated illustrations, or AI-generated cartoons, influences consumers' visually based perceptions of source credibility. In this study, we operationalize “visually based perceptions of source credibility” as participants' evaluations of trustworthiness, expertise, and goodwill when viewing an image of a farmer without accompanying textual context.

Purpose, Objectives, and Research Question

The purpose of this study was to examine how Georgia consumers form initial, visually based perceptions of a farmer's source credibility when exposed to different image types depicting the same individual. Specifically, this study focused on first-impression evaluations of the farmer depicted, rather than credibility of an accompanying message, article, or broader food system. Additionally, this study sought to identify which image type consumers prefer to visually represent a farmer in communication contexts.

The following research objectives guided the study:

RO1: Examine participants' visually based perceptions of the farmer's source credibility based on three image types (photograph, AI-generated illustration, and AI-generated cartoon).

RO2: Identify which image type (photograph, AI-generated illustration, and AI-generated cartoon) participants most prefer to represent a farmer.

The following research question further explored this topic:

RQ1: What reasons do participants provide for preferring a particular image type to represent a farmer?

Methodology

To address the proposed research objectives and research question, this study employed a quasi-experimental design using an online survey administered via Qualtrics. This study is part of a broader research initiative aimed at identifying consumer perceptions of food and environmental impacts in Georgia (see Ramsey et al., 2025).

Population and Sample

A non-probability, purposive sampling strategy was used to recruit participants through Qualtrics Panels. Eligible participants were required to be 18 years of age or older and current residents of Georgia. Qualtrics applied internal panel matching and quota sampling procedures based on key demographic variables (e.g., age, gender, race/ethnicity) to approximate the adult population of Georgia, as reported in the 2020 U.S. Census. Although the sampling strategy did not constitute a census, the goal was to obtain a broadly representative sample of Georgia's adult population.

A total of 503 responses were initially collected. After removing incomplete responses and those failing quality checks (e.g., straight-lining, speeding, incorrect responses to instructed items), 492 usable responses remained ($N = 492$). The completion rate, calculated by comparing the number of survey starts to completions, was 97.8%.

The majority of participants identified as female (67.4%, $n = 335$), non-Hispanic (81.3%, $n = 409$), and Millennial (32.7%, $n = 161$). Politically, the sample was moderate, with 44.3% ($n = 218$) identifying as such. Detailed respondent demographics can be viewed in Table 1.

Table 1*Demographics of Participants (N = 492)*

		<i>n</i>	%
Gender			
	Female	335	68.1
	Male	154	31.3
Ethnicity			
	Non-Hispanic/Latino(a)/Chicano(a)	409	81.3
	Hispanic/Latino(a)/Chicano(a)	83	16.9
Generational Age			
	Gen. Z	70	14.2
	Baby Boomer	146	29.7
	Gen. X	96	19.5
	Millennials	161	32.7
	Silent Gen.	19	3.9
Education			
	Less than 12 th grade	13	2.6
	High School	107	21.7
	Some college	117	23.8
	2-year college	117	23.8
	4-year college	67	13.6
	Graduate or Professional degree	71	14.4
Income			
	Less than \$25,000	110	22.3
	\$25,000 - \$49,999	122	24.7
	\$50,000 - \$74,999	118	23.9
	\$75,000 - \$149,999	105	21.3
	\$150,000 - \$249,999	26	5.3
	\$250,000 or more	11	2.2
Political Ideology			
	Very Liberal	46	9.3
	Liberal	62	12.6
	Moderate	218	44.3
	Conservative	101	20.5
	Very Conservative	65	13.2
Political Affiliation			
	Republican	196	39.84
	Democrat	172	34.96
	Independent	112	22.76
	Other	12	2.44

Instrument Development

Survey data were collected using a structured instrument developed by the researchers and reviewed by an expert panel. This panel included three associate professors in agricultural communication from the University of Georgia, with expertise in source credibility, public opinion research, and survey design, evaluated the instrument for face and content validity. Institutional Review Board (IRB) approval was obtained prior to data collection.

Non-probability opt-in sampling was conducted through Qualtrics, consistent with common practices in public opinion research (Baker et al., 2013). While non-probability samples may require adjustments for nonrandom selection and nonresponse, they have been shown to produce data of comparable quality to probability-based samples when appropriate weighting methods are applied (Twyman, 2008).

The survey included two primary components: (a) perceived source credibility based on exposure to one of three image types and (b) participants' preferred image type to represent a farmer. Participants were randomly assigned to one image type before responding to credibility items, then later shown all three images to select their preferred representation.

Image Type Treatments and Source Credibility Scale

Three image types were used, each depicting the same older male farmer smiling and kneeling in a crop field (see Figure 1). The photograph, sourced from Adobe Stock, was selected for clarity, facial expression, and body posture—all known to influence credibility judgments (Peng et al., 2023).

Figure 1

Image Type Treatments



To isolate visual style, the AI-generated illustration and AI-generated cartoon were generated by the lead researcher using ChatGPT. The illustration retained realistic anatomical proportions and added artistic enhancements such as stylized crop rows and enhanced lighting. In contrast, the AI-generated cartoon featured exaggerated outlines and simplified shapes, providing a more abstract and playful representation.

While both the AI-generated cartoon and AI-generated illustration may be broadly categorized as "illustrations," we used distinct labels based on abstraction level and visual

complexity. This distinction was made to examine whether different stylizations within non-photographic images influence source credibility differently, addressing a gap noted in prior visual perception literature.

To reduce confounding variables, all three image types were created using the same base image, with only stylistic elements altered. No additional contextual cues (e.g., logos, article text) were added, allowing us to isolate visual impression as the primary stimulus.

After viewing their randomly assigned image, participants rated their impressions of the farmer using an 18-item semantic differential scale, commonly used in credibility research. They responded to the prompt: “Based on the [photograph, illustration, cartoon] of the farmer, please indicate your feelings toward the farmer.” participants selected a position on a 7-point scale between paired adjectives reflecting their perceptions. The word pairings included: *Unintelligent/Intelligent*, *Untrained/Trained*, *Doesn’t care about me/Cares about me*, *Dishonest/Honest*, *Doesn’t have my interest at heart/Has my interest at heart*, *Untrustworthy/Trustworthy*, *Inexpert/Expert*, *Not relatable/Relatable*, *Not concerned with me/Concerned with me*, *Dishonorable/Honorable*, *Uninformed/Informed*, *Immoral/Moral*, *Incompetent/Competent*, *Unethical/Ethical*, *Insensitive/Sensitive*, *Stupid/Bright*, *Phony/Genuine*, and *Not understanding/Understanding*.

Responses were recorded on a 7-point semantic differential scale, with 1 indicating a negative impression and 7 indicating a positive impression. An average score across all 18 items was calculated to produce an overall source credibility rating. The scale demonstrated high internal consistency (Cronbach’s $\alpha = .97$).

Following the credibility items, participants viewed all three image types and selected the one they most preferred to represent a farmer. An optional open-ended question invited participants to explain their reasoning.

Data Analysis

Quantitative data were analyzed using descriptive statistics and ANOVA in SPSS 26.0. To analyze the qualitative responses, an inductive thematic analysis was conducted. Responses were open-coded to identify recurring ideas or sentiments. These codes were then grouped into overarching themes, which were reviewed by the expert panel to ensure consistency and theoretical alignment with source credibility theory.

This study used an inductive approach, allowing themes to emerge from the data without predetermined expectations. However, in line with Braun and Clarke (2006), a theoretical lens was applied in the interpretive stage, acknowledging that purely inductive analysis is rarely free from theoretical influence. Thematic analysis has been widely adopted for analyzing open-ended survey responses (Karavadra et al., 2020; Pettigrew et al., 2016; Resko et al., 2019).

Limitations

This study has several limitations. First, while the AI-generated cartoon and AI-generated illustration are both non-photographic renderings, they were intentionally distinguished by their level of visual abstraction. This allowed for the exploration of how varying degrees of stylization might affect perceived credibility—an area still emerging in visual communication research.

Second, the images were presented without contextual elements (e.g., accompanying articles or captions). This choice was deliberate to isolate the effect of image type on credibility perceptions, following previous research that examines source credibility based solely on visual cues. However, we acknowledge that in real-world media environments, credibility judgments are often shaped by both visual and textual content. Future research could build on these findings by embedding images within realistic content to assess how context moderates perceptions of source credibility.

Third, the farmer depicted in all three images was an older white male, consistent with U.S. Department of Agriculture statistics showing that 63.7% of U.S. farmers in 2022 were male and 63.2% were over the age of 55 (USAFacts, 2025). While this demographic alignment supports the realism of the image selection, it may also limit the generalizability of findings to more diverse farmer identities. Participants may have evaluated the farmer's credibility in part based on demographic cues rather than solely image style. Future studies could explore how farmer race, gender, and age interact with image type to influence source perceptions.

Finally, as a non-probability sample within a single state, findings are not generalizable beyond the study population. Nonetheless, this geographic focus aligns with the broader project's goal of assessing food and environmental perceptions within Georgia.

Results

RO1: Examine participants' visually based perceptions of the farmer's source credibility based on three image types (photograph, AI-generated illustration, and AI-generated cartoon).

Descriptive statistics were calculated to assess visually based perceptions of the farmer's source credibility across three image types. Participants rated the farmer using an 18-item semantic differential scale on a 7-point continuum (1 = very negative, 7 = very positive). The overall mean credibility score was 5.35, placing it in the slightly positive range according to real limits of the scale (1.00–1.49 = Very Negative; 1.50–2.49 = Negative; 2.50–3.49 = Slightly Negative; 3.50–4.49 = Neutral; 4.50–5.49 = Slightly Positive; 5.50–6.49 = Positive; 6.50–7.00 = Very Positive). All three image types were rated within the *slightly positive* range: photograph ($M = 5.32$, $SD = 1.51$), illustration ($M = 5.49$, $SD = 1.53$), and cartoon ($M = 5.25$, $SD = 1.49$; see Table 2).

Table 2*Perceived Levels of Source Credibility Among Image Types*

Image Type	<i>M</i>	<i>SD</i>
Photograph	5.32	1.51
Illustration	5.49	1.53
Cartoon	5.25	1.49
Overall Mean	5.35	—

Note. Mean differences were not significant at $p = .05$.

To determine whether statistically significant differences existed among the three image types, a one-way ANOVA was conducted. Results revealed no significant effect of image type on perceptions of source credibility, $F(2, 489) = 1.72$, $p = .180$. The effect size was minimal ($\eta^2 = .007$, $\omega^2 = .003$), indicating that image type explained only a small proportion of the variance in credibility perceptions.

Post hoc comparisons using Tukey's HSD test also showed no statistically significant differences between any of the image conditions (all $ps > .20$). Although mean ratings were numerically higher for the illustration ($M = 5.49$) compared to the photograph ($M = 5.32$) and cartoon ($M = 5.25$), these differences were not statistically significant (see Table 3).

Table 3*One-Way ANOVA for Source Credibility Ratings by Image Type*

Source	Sums of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Between Groups	7.79	2	3.89	1.79	.180
Within Groups	1106.73	489	2.26		
Total	1114.52	491			

Note. The dependent variable was source credibility rating on a 7-point semantic differential scale. No statistically significant differences were observed among image types.

RO2: Identify which image type (photograph, AI-generated illustration, AI-generated cartoon) participants most prefer to represent a farmer.

Participants were asked to indicate which of the three image types they preferred most to represent a farmer. Frequencies showed that the vast majority preferred the photograph ($n = 410$), followed by the illustration ($n = 43$), and the cartoon ($n = 39$; see Table 4).

Table 4*Frequencies of Preferred Image Types to Represent a Farmer (N = 492)*

Image Type	<i>n</i>
Photograph	410
Illustration	43
Cartoon	39

RQ1: What reasons do participants provide for preferring a particular image type to represent a farmer?

To explore participants' image preferences, open-ended responses were analyzed thematically. Among those who preferred the photograph, three key themes emerged: (1) reality is best, (2) relatability, and (3) image quality. Many participants emphasized the authenticity of real-life imagery, using descriptors like “genuine,” “authentic,” and “real person working.” One participant explained, “I don’t like advertising that uses animation. It’s more authentic when they use real people, whether it’s a live person or a photo of a real person.” Others described a stronger emotional connection to the farmer in the photograph, noting that realism helped humanize the individual: “By creating a cartoon version of the farmer, it takes away his humanity and it is easier to see him as just a character and not an actual person.” Participants also cited the photograph’s high visual quality—particularly its colors and definition—with one sharing, “I chose the original picture because the view of nature is amazing and the expression of the farmer is defined.”

For those who preferred the illustration, two major themes emerged: (1) balance of realism and creativity, and (2) modern design appeal. Participants described the image as a compromise between authenticity and artistry, often calling it “a good compromise” or “the right amount of detail.” Others emphasized its relevance to contemporary visual trends, suggesting it might appeal to younger or design-conscious audiences. One participant remarked, “The image of the young farmer that is illustrated reminds me of a coloring book or a children’s book... The image in the middle seems like it tries to relate to me generationally because it aligns with current design trends.”

Among those who preferred the AI-generated cartoon, a single dominant theme emerged: indistinguishable characteristics. Participants appreciated the AI-generated cartoon’s ambiguity, noting that it avoided specific markers of age, gender, or race. As one participant explained, “More people can relate to the cartoon because it doesn’t depict a single type of person.”

Several cross-cutting concepts also appeared across all image types. Regardless of their preferred image, many participants described the farmer as “friendly,” “knowledgeable,” and “caring”—likely due to consistent visual cues across all treatments (e.g., the farmer’s smile and body posture). Another recurring idea involved the perceived audience: several participants suggested the AI-generated cartoon (and occasionally the AI-generated illustration) would be more appropriate for youth-oriented communications, while others viewed these stylized images

as too childish or simplistic. One respondent shared, “The drawings feel more in touch with the community. They interact with adults and children.”

Finally, a number of participants across preference groups expressed a desire for more diverse portrayals of farmers, citing the need to better represent women, people of color, and younger individuals.

Conclusions and Discussion

This study examined how image type influences visually based perceptions of a farmer’s source credibility, as defined by trustworthiness, expertise, and goodwill (McCroskey & Teven, 1999). Guided by source credibility theory, we explored how participants evaluated the same farmer depicted in a photograph, an AI-generated illustration, and an AI-generated cartoon.

Although descriptive findings indicated that participants generally held moderately positive impressions across all three image types, the one-way ANOVA revealed no statistically significant differences in perceived source credibility between them. This suggests that image type alone—when controlling for posture, facial expression, and background—may not exert a strong influence on credibility judgments. While the AI-generated illustration condition produced the highest mean score, followed by the photograph and then AI-generated cartoon, the small effect size ($\eta^2 = .007$) indicates that other factors beyond visual style likely shape public evaluations of farmers.

These findings extend prior research on credibility and agricultural imagery. For example, Rodríguez and Lin (2016) found that illustrations can boost engagement but may reduce perceived credibility compared to photographs. However, our results suggest that when AI-generated illustrations preserve realism and emotional cues, such as a natural background or visible smile, they may communicate credibility comparably to photographs. This nuance is important in today’s digital landscape, where visual content is increasingly algorithmically generated.

Notably, although credibility ratings were statistically similar, respondent preferences for the image that “best represented a farmer” were overwhelmingly in favor of the photograph. This aligns with prior studies suggesting that photographs are perceived as more authentic, trustworthy, and realistic (Busch & Spiller, 2018; Reyes, 2024). Open-ended responses supported this trend, with participants citing the realism, relatability, and quality of the photograph as reasons for their choice. These reflections are consistent with Preininger’s (2023) assertion that agricultural visuals are embedded with ideological and emotional framings, not merely aesthetic decisions.

Participants who preferred the illustration often described it as balancing realism with creativity—echoing Rodríguez Estrada and Davis (2015), who argue that stylized visuals can bridge scientific accuracy and emotional storytelling. This suggests that illustrations may be particularly effective for younger audiences or viewers with high visual literacy. Conversely, participants who favored the AI-generated cartoon noted its ambiguity, allowing for broader and more inclusive interpretations of who “counts” as a farmer. This finding aligns with research on

visual ambiguity and stereotype flexibility (Peng et al., 2023), indicating that less-defined visuals may enable viewers from diverse backgrounds to project themselves into the image.

Together, these findings underscore the tensions in agricultural communication: while realism and authenticity remain highly valued, there is a growing demand for inclusive, engaging, and imaginative portrayals that resonate with broader audiences. As AI-generated visuals become more commonplace in agricultural and science communication, it is increasingly important to understand how different visual forms, including their style, perceived origin, and emotional tone, shape public trust. Visuals are not neutral; they are interpretive signals that can either affirm or disrupt pre-existing mental models of farming. Future work should continue exploring how image type interacts with viewer characteristics, message context, and platform medium to shape credibility assessments in an evolving visual media ecosystem.

Implications and Recommendations

The findings of this study offer several practical and theoretical implications for agricultural communicators, educators, and researchers navigating increasingly visual and digital communication environments.

Implications for Practice

While source credibility ratings did not differ significantly by image type, the strong preference for the photograph underscores the enduring role of realism in shaping perceptions of authenticity. This suggests that when building trust in agricultural contexts communicators should continue to prioritize high-quality, authentic photographs of real farmers in real settings. Visuals that convey genuine expressions, natural environments, and realistic detail are likely to foster credibility and emotional connection.

However, nuanced support for AI-generated illustrations reveals an opportunity to use stylized visuals in contexts where creativity or relatability is valued. For example, agricultural educators or leadership trainers developing content for youth audiences or design-conscious learners might incorporate illustrated farmer visuals in infographics, digital workbooks, or story-based modules. These visuals can retain emotional cues while enhancing aesthetic appeal and engagement.

The AI-generated cartoon image's ambiguity also offers practical insights for communicators aiming to foster diversity and inclusivity. Participants valued the cartoon's open-ended representation, which avoided racial, gendered, or age-based assumptions. In multicultural or urban settings, especially when communicating to audiences with limited direct ties to farming, abstract or stylized imagery may help expand who sees themselves represented in agriculture. For instance, food literacy campaigns could integrate AI-generated cartoon visuals to signal openness and inclusivity across identity groups.

Recommendations for Future Research

This study contributes to a growing scholarship at the intersection of visual communication and agricultural trust, while also highlighting several areas for further exploration.

First, researchers should further investigate how AI-generated imagery affects audience perceptions. Although this study used AI tools to create the illustration and cartoon images, we recommend deeper examination of how perceived origin (e.g., AI vs. human-created) affects credibility, emotional response, and trust. More work is also needed to understand how image context, such as the inclusion of captions, logos, or source citations, shapes interpretation. In this study, all three image types were presented in isolation; future research should explore how contextual cues interact with visual style to shape meaning-making.

Second, as digital communication increasingly features non-static formats, such as GIFs, reels, or short-form video, scholars should explore how motion and interactivity influence attention, recall, and credibility. Visual credibility is not fixed; it evolves with platform norms and user expectations.

Third, audience segmentation remains critical. Future studies should examine how demographics and psychographics (e.g., political ideology, visual literacy, cultural background) moderate visual interpretation. For example, preferences for realistic vs. stylized imagery may vary by age, media exposure, or agricultural experience.

Finally, while this study focused on trustworthiness, expertise, and goodwill, future work might consider expanding the construct of source credibility to include traits such as likability, attractiveness, or relatability—especially in visual-first communication settings where messenger aesthetics carry implicit social cues (McGuire, 1985).

By diversifying the types of visuals studied, considering multimodal formats, and accounting for audience and platform, future research can guide the design of agricultural media that is not only credible, but also inclusive, adaptive, and emotionally resonant.

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