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Seeds of Change: Exploring Digital Storytelling in Sustainable Cotton YouTube Videos

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Abstract

This study examines the communication techniques and frames used in the U.S. Cotton Trust Protocol's YouTube content, as well as viewer engagement with the content. Through a content analysis of the organization's 28 producer-facing videos, this research identified key framing strategies, emotional and logical appeals, and sources used. The results revealed that while the organization employs a variety of techniques, the diversity still contributed to very low viewer engagement. Emotional appeals, mainly emphasizing hope, and personal narratives highlighting cotton producers were the most frequently used techniques. Farmers emerged as the most utilized source as a strategy to enhance trust and reliability. Environmental frames dominated the videos, paired with an equal distribution of episodic and thematic framing styles throughout the YouTube channel. The findings highlighted the critical need for the U.S. Cotton Trust Protocol to refine its communication strategies and focus on styles and techniques that resonate more effectively with their target audience. By enhancing video content, the organization can further its impact on the cotton industry and drive greater awareness and participation in sustainability. This study provides valuable insights for improving the reach and influence of the U.S. Cotton Trust Protocol and sustainability initiatives in general.

Introduction and Literature Review

Given the estimation that global crop production must double by the year 2050 to support our growing population (Roberts & Mattoo, 2018), sustainable agriculture is more crucial than ever. Even so, many agricultural producers are hesitant about transitioning toward sustainable practices due to a global lack of knowledge (Trigo et al., 2021). To be considered sustainable agriculture, a practice must encompass four key qualities: integrated management, dynamic balance, regenerative design, and social development (Trigo et al., 2021). Simply put, the need for sustainable practices means that producers should be implementing systems that include the combination of a high yield potential while minimizing negative environmental impacts (Roberts & Mattoo, 2018). Some examples of sustainable practices are no-till farming, in which crops are grown without disturbing the soil through tillage, and cover cropping, which involves planting non-cash crops to cover the soil and preserve soil health rather than for harvest (Bayramova et al., 2024). Cotton plays a particularly critical role in both the international economic and environmental landscape (Worsham, 2023), making it an ideal place to begin the push for sustainable practices.

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Portrayals of intensive, conventional agriculture often highlight its effects on climate change and its contributions to water pollution, loss of biodiversity, and natural resource depletion (Trigo et al., 2018). Additionally, the global population is estimated to reach somewhere between eight and ten billion by 2050 (Roberts & Mattoo, 2018). This increase in global population is widely seen as intensifying the demand for agricultural production, underscoring the already present need for sustainable practices. Many believe that without a transition toward sustainability, the current trajectory of agricultural production could lead to significant and potentially irreversible consequences for our planet (Trigo et al., 2018).

Rise of Sustainable Cotton

As part of the Partnerships of Climate-Smart Commodities initiative, the United States Department of Agriculture (USDA) has invested $3.1 billion across 141 different sustainability projects (USDA, n.d.). The anticipated outcome of these projects involves more than 25 million acres of working land adopting sustainable practices (USDA, n.d.), making the Partnerships of Climate-Smart Commodities a pivotal force in driving sustainable production. This initiative has played a key role in the rise of sustainable cotton. One of the more notable sustainability initiatives is the U.S. Cotton Trust Protocol, a program where cotton producers track and report their sustainability metrics in exchange for a stipend that recognizes their commitment to the long-term sustainability of the cotton industry (U.S. Cotton Trust Protocol, 2024). This initiative focuses on continuously improving six key areas: water use, energy efficiency, greenhouse gas emissions, soil conservation, soil carbon, and land use. Efforts to improve these areas are then promoted to consumers through partnerships with major retailers such as Old Navy, Levi's, Target, and other recognizable brands (U.S. Cotton Trust Protocol, n.d.).

There is a growing awareness and acceptance of eco-friendly materials within the textile industry, particularly as consumer demand for sustainably produced cotton continues to rise (Pranta et al., 2024). Given the growing popularity of sustainably grown cotton with consumers and the critical role that sustainable agriculture plays in mitigating climate change and preserving natural resources, it is more important than ever to identify the most effective ways to communicate the importance of sustainable cotton to producers. As initiatives like the U.S. Cotton Trust Protocol continue to grow, understanding how to engage producers and drive the adoption of sustainable practices is key to ensuring the viability and fostering a more environmentally responsible version of the industry. Benefits for YouTube creators include increased traffic, enhanced social discovery, and expansive reach, meaning a well-coordinated YouTube strategy could greatly benefit advocacy efforts (Miles, 2014). This supports the assumed effectiveness of YouTube as a tool for communicating sustainability messages to producers, making it an essential medium to understand through this research.

Digital Storytelling in Modern Communication

Digital storytelling, or communication of information through digital technologies (Alexander, 2017), is one way that agricultural communicators could work to drive cotton producers toward sustainable practices if used effectively. Digital storytelling is quickly adapted to each new medium, contributing to a continuously evolving toolbox of techniques and methods to be experienced by a wide audience (Alexander, 2017). This practice is different from classical storytelling in that audience members can take on active roles in the narrative and its outcome through mediums such as social media, websites, blogs, and many more (Miller, 2014).

Engagement with a story involves behavior from audience members that implies a response to the content, making the study of engagement very valuable to practitioners (Evans, 2019). Previous research has identified emotional appeal, logical appeal, source credibility, and personal narratives as communication techniques that foster audience engagement (Bhatia, 2019; Brinol & Petty, 2009; Greene et al., 2019). Studies by Stoknes (2015) and Bain et al. (2016) found that hope appeals in visual

communication were effective in giving the audience positive perceptions of the future. Additionally, Greene et al. (2019) found that personal narratives in messaging influenced positive attitudes among the audience. However, while personal narratives are crucial to general communication strategies, Zebrowski et al. (2023) found that family-focused narratives were the most influential type of narrative in an agricultural context. Additionally, work by House et al. (2019) determined that people in the agricultural industry view farmers as reliable and trustworthy sources of information, whereas Joshi and Joshi (2019) said that farmers and producers prefer more formal, credible sources over non-formal sources, such as farmers. The current study explores all of these techniques and their success in engaging and persuading audiences.

Theoretical Framework

This study was grounded in Framing Theory. Framing involves the selection of specific elements of a context and increasing their salience to shape how they are communicated, ultimately influencing the way a problem is defined and evaluated, as well as its potential solutions (Entman, 1993). Entman (1993) defines salience as the process of making certain information more prominent or meaningful to the audience, increasing the likelihood that it will be processed and committed to memory. Through framing, the media actively shapes the perspectives its audience will use to interpret and discuss topics and ideas (Scheufele, 1999). Frames, as Scheufele (1999) notes, transform otherwise unrecognizable occurrences into comprehensible, identifiable information.

Framing effects occur when even slight changes in the way an issue or event is presented lead to potentially significant shifts in public opinion (Chong & Druckman, 2007). This study draws on the concepts of episodic and thematic framing. Thematic framing is a visual framing technique describing the illustration of issues in a way that emphasizes broader contexts and trends (Iyengar, 1996). Conversely, episodic framing focuses on individual stories or specific events (Iyengar, 1991). If both types of frames are received as intended, they affect the attitudes and behaviors of the audience (Chong & Druckman, 2007). Episodic and thematic framing are commonly used in advocacy, specifically when fostering environmental accountability (Clune & O'Dwyer, 2020). Additionally, previous research (Boykoff & Boykoff, 2007; Brammar & Pavelin, 2006; Dorfman et al., 2005; Nisbet, 2009; Nisbet & Scheufele, 2009; Shah et al., 1996) has determined the combination of these framing styles with strategic, environmental, economic, social responsibility, innovative, and health frames to be effective in environmental and social responsibility communication. Based on this trend, we can assume these types of frames are important to observe in sustainable cotton messaging.

Purpose & Research Questions

The purpose of this study is to assess the effectiveness of different digital storytelling techniques and framing methods in fostering producer engagement with cotton sustainability messages on YouTube. The following research questions guided this study:

1. Which digital storytelling techniques are employed in U.S. Cotton Trust Protocol messages?
2. What are the primary frames used in U.S. Cotton Trust Protocol messages?
3. What is the YouTube engagement of U.S. Cotton Trust Protocol videos?

Methods

A quantitative content analysis of the U.S. Cotton Trust Protocol's YouTube channel was conducted to address the research questions. Launched in 2020, the U.S. Cotton Trust Protocol aims to drive the conversion to sustainably grown cotton, emphasizing verifiable goals in sustainability metrics and providing tangible rewards for producers to reach these goals (U.S. Cotton Trust Protocol, 2024). The U.S.

Cotton Trust Protocol was selected for this research due to its prominence, as it is among the most significant sustainability initiatives targeting cotton producers (U.S. Cotton Trust Protocol, 2024). The choice of YouTube videos as the medium for this analysis lies in their proven effectiveness in promotion and reaching a diverse audience (Miles, 2014). Lastly, as content analysis is an effective way of observing media content involving a visual aspect (Neuendorf, 2017), we deemed it the most appropriate method for this study.

The U.S. Cotton Trust Protocol's YouTube channel houses 28 videos. Due to the manageable amount of content and availability of time and resources, a census of the YouTube channel was deemed feasible. A census is an analysis of every content unit in a given population (Riffe et al., 2024). The videos ranged from 16 seconds to 17 minutes and 24 seconds in length. Thirty-nine percent of the sample ($f = 11$) were animated videos, and 61% ($f = 17$) were live-action videos.

Digital storytelling techniques and frames were analyzed to understand which aspects of the need for sustainability communicators are emphasizing to producers and in what way they are being communicated. An extensive literature review was conducted to formulate a coding scheme. The coding protocol for framing was informed by previous studies (Boykoff & Boykoff, 2007; Brammer & Pavelin, 2006; Dorfman et al., 2005; Nisbet, 2009; Nisbet & Scheufele, 2009; Shah et al., 1996), which have identified recurring frames in environmental and social responsibility communication to be categorized as strategic, environmental, economic, social responsibility, innovation, health, and informative frames. An informative frame was added to allow the scheme to fit the context of this study better. Each frame is explained in Table 1.

Table 1

Frame Descriptions

Frame	Description
Strategic	Highlights the benefits of sustainable practices with a clear focus on action-oriented messages encouraging others to adopt similar behavior
Environmental	Emphasizes environmental responsibility, protection of natural resources, effects on climate change, and/or general benefits of sustainability or disadvantages of a lack of sustainability
Economic	Centered around financial benefits (cost savings, increased profitability, etc.) from adopting sustainable cotton practices or financial disadvantages of not doing so
Social Responsibility	Focuses on the social impact of adopting sustainable practices such as community well-being, worker rights, contributing to the greater good, or other responsibilities to the community
Innovation	Emphasizes technological advancements or innovative methods that make sustainable cotton production more feasible than non-sustainable practices
Health	Highlights the impact of sustainable cotton on consumer health (could be mental health), or the health benefits of environmentally friendly farming practices
Informative	Presents only information about the U.S. Cotton Trust Protocol and how it works. Any mention of why the USCTP is important or the benefits of enrolling negate the use of this frame.

After each video was assigned a primary frame, it was also coded for a framing style of episodic or thematic. Episodic framing focuses on a single story or event (Iyengar, 1991), for example a single farmer's journey toward sustainable cotton production. Thematic framing covers broader societal trends (Iyengar, 1991), such as industry-wide change or global sustainability efforts. This distinction was important to the analysis because, as Gross and D'Ambrosio (2004) explain, episodic and thematic framing of the same story can have different emotional effects on the receiver.

A comprehensive literature review (Bhatia, 2019; Brinol & Petty, 2009; Greene et al., 2019; Xie et al., 2022) identified emotional appeal, logical appeal, source credibility, and personal narratives as core techniques for effective persuasion and attitudinal change, informing the framework for the persuasive digital storytelling techniques coding scheme in this study. Past studies have found that emotions and logic are both significant factors in the audience's decision-making process (Bhatia, 2019), and credible sources and personal narratives are both effective tools for driving attitudinal and behavioral change (Brinol & Petty, 2019; Greene et al., 2019). Therefore, each video was analyzed using each of these four persuasive techniques. Logical appeals were coded by recording the presence and absence (0 = No, 1 = Yes) of evidence-based appeals, rational appeals, expert testimonials, and cause-and-effect appeals (Bhatia, 2019). For reference, each logical appeal is defined in Table 2. Personal narratives were measured by coding for the presence and absence of producer, consumer, community, and family narratives.

Table 2

Logical Appeal Definitions

Appeal	Definition
Evidence-Based	Uses data, statistics, or factual evidence to demonstrate the advantages of sustainable practices. This appeal reinforces the argument by presenting concrete, measurable outcomes
Rational	Applies logical reasoning to show the practicality of sustainable practices, focusing on rational benefits like profitability or efficiency. Provides a comparative analysis
Expert Testimonial	Relies on authority or expert opinions to bolster credibility, providing scientific explanations or endorsements from reputable sources.
Cause and Effect	Illustrates how specific actions lead to particular outcomes, emphasizing the direct connection between adopting sustainable practices and positive results.

Emotional appeals were analyzed based on the presence or absence of fear, anxiety, sadness, hope, humor, happiness, and guilt (0 = No, 1 = Yes). This framework was adapted directly from Xie et al.'s (2022) study measuring emotional appeals in organizational YouTube videos, which was chosen due to its established validity and applicability to this research. Source credibility of each video was recorded as the presence or absence of each category on a list of sources adapted from a previous study measuring persuasive message factors in video content (Krause et al., 2016). The established validity and similarity of the methodology of this study made Krause et al.'s (2016) sources framework relevant. Minor adjustments were made to better suit the context of this research, including removing any source without clear relevancy to the topic. After these adjustments, the list of observed sources included scientists, public officials, industry workers, farmers, governmental organizations, non-governmental organizations, and doctors.

Finally, each video was coded for its amount of engagement from the audience. Evans (2019) defines engagement as behaviors by the audience that imply a response to the content. Based on this definition, engagement was quantified by recording the number of likes, dislikes, and comments received on each video. This would allow us to recognize what type of audience interaction occurred for each video, and if there was a positive or negative interaction happening among viewers. Engagement was important to analyze, as it provides valuable insight for practitioners about the impact of their content (Evans, 2019). Likes and comments on each video were recorded on the same day to ensure an accurate comparison. While engagement in its totality is more than likes, dislikes, and comments, for the purpose of this study, those were the primary engagement metrics that could be analyzed through YouTube videos.

Researchers conducted a pilot study to determine its validity and reliability. During the pilot study, the primary researcher and a volunteer graduate student each coded the entire sample (all videos used as part of this study) separately to establish intercoder reliability (Wimmer & Dominick, 2014). The decision

was made to use the entire sample rather than a percentage due to the limited sample size. Deen Freelon's ReCal2, Reliability Calculator for 2 Coders, was used to calculate percent agreement, Scott's Pi, Cohen's Kappa, and Krippendorff's Alpha for each observed variable (Wimmer & Dominick, 2014). Across 25 variables, percent agreement ranged from 86% to 100%. Since many variables only had two options (present or absent) and only one was applied in coding, most calculations aside from percent agreement were either undefined or considered insufficient for accurately representing intercoder agreement. An expert in the field was consulted on each disagreement between coders in the pilot study to select the more accurate code, as this is an effective method for addressing differences and enhancing reliability (Haplin, 2024). A combination of all agreements from the pilot study and the decisions from the expert reference comprised the final codes used for data analysis.

All data analysis was conducted using SPSS, and the data was strictly descriptive. To answer the first research question, frequencies of the recorded instances of all emotional appeals, logical appeals, personal narratives, and credible source usage were used. The second research question was answered with frequencies of the observed frames and framing styles. Finally, to answer the third research question, means and frequencies of likes, dislikes, and comments were used.

Limitations

The scope of this study was limited to the analysis of YouTube videos produced by the U.S. Cotton Trust Protocol and, therefore, may not be fully representative of all the organization's persuasive efforts. This limits the generalizability of the results to other channels or communication strategies. Additionally, while emotional appeals were coded based on previously established and trusted frameworks, their interpretation is still inherently subjective. Interpretation of these appeals could vary among audiences, potentially influencing the findings' reliability. The study also relied on social media engagement metrics, likes, and comments as a representation of audience engagement. While we understand that engagement goes beyond a video likes and comments received on a digital platform, we were limited to these engagement metrics through this study. However, these metrics may not accurately reflect the videos' influence on membership and behavior change.

Results

RQ1: Which digital storytelling techniques are employed in U.S. Cotton Trust Protocol messages?

Table 3 outlines the presence of emotional appeals within U.S. Cotton Trust Protocol videos. The hope appeal was the most utilized emotion and was present in 22 of the 18 videos (75.9%). Anxiety was the only other emotional appeal used, appearing once within the videos ($f = 1$, 3.4%).

Table 3

Storytelling Techniques in U.S. Cotton Trust Protocol Videos (N = 28)

Emotion	Frequency Present	Percentage Present
Hope	22	75.9%
Anxiety	1	3.4%
Sadness	0	0%
Humor	0	0%
Happiness	0	0%
Guilt	0	0%

Table 4 displays the use of personal narratives within U.S. Cotton Trust Protocol videos. Producer narratives were the most prevalent type of narrative (*f* =10, 34.5%). Family narratives appeared 4 times (*f* = 4), community narratives appeared 2 times (*f* = 2), and consumer narratives were never used.

Table 4

Personal Narratives in U.S. Cotton Trust Protocol Videos (N = 28)

Narrative	Frequency Present	Percentage Present
Producer	10	34.5%
Family	4	10.3%
Community	2	6.9%
Consumer	0	3.4%

Table 5 displays the presence of credible sources within U.S. Cotton Trust Protocol videos. Only farmers were utilized among the nine potential credible sources (*f* = 8, 2.6%).

Table 5

Credible Sources in U.S. Cotton Trust Protocol Videos (N = 28)

Source	Frequency Present	Percentage Present
Farmer	8	2.6%
Public Official	0	0%
Industry	0	0%
Public Official	0	0%
Governmental Organization	0	0%
Non-governmental Organization	0	0%
Doctor	0	0%
Other	0	0%

Table 6 outlines the use of logical appeals in U.S. Cotton Trust Protocol videos. Rational appeals were the most prominent logical appeal, appearing 23 times (*f* = 23, 79.3%).

Table 6

Logical Appeals in U.S. Cotton Trust Protocol Videos (N = 28)

Appeal	Frequency Present	Percentage Present
Rational	23	79.3%
Evidence-based	13	44.8%
Cause-and-effect	9	31.0%
Expert-based	0	0%

RQ2: What are the primary frames used in U.S. Cotton Trust Protocol messages?

Table 7 explains the use of frames in the U.S. Cotton Trust Protocol videos. An environmental frame was the most commonly used frame (*f* = 17, 58.6%). Social responsibility and innovative frames each appeared twice (*f* = 2, 6.9%). Strategic, informative, and economic frames each appeared once (*f* = 1, 3.4%), and the health frame was not used.

Table 7

U.S. Cotton Trust Protocol Video Frames (N = 28)

Frame Type	Frequency	Percentage
Environmental	17	58.6%
Social Responsibility	2	6.9%
Innovation	2	6.9%
Informative	1	3.4%
Strategic	1	3.4%
Economic	1	3.4%
Health	0	0%

Upon analysis of the use of framing styles, the data revealed there was equal usage of episodic and thematic framing across the sample (f = 14, 50.0%). These results are displayed below in Table 8.

Table 8

U.S. Cotton Trust Protocol Video Framing Styles (N = 28)

Framing Style	Frequency Used	Percentage Used
Episodic	14	50.0%
Thematic	14	50.0%

RQ3: What is the YouTube engagement of U.S. Cotton Trust Protocol videos?

The U.S. Cotton Trust Protocol YouTube channel had 297 subscribers and video view counts ranging from 42 to over 15,000 at the time of analysis. Measurement of likes, dislikes, and comments as engagement metrics revealed some variety across videos. Of the three types of engagement observed, the only type of engagement videos found was likes. The most engagement found was five likes (f = 2, 6.9%), but a majority of videos received either one (f = 10, 34.5%) or zero likes (f = 11, 37.9%). No dislikes or comments were observed. These results are outlined in Table 9.

Table 9

U.S. Cotton Trust Protocol Video Engagement (N = 28)

Engagement	Number of Videos	Percentage
Zero Likes	11	37.9%
One Like	10	34.5%
Two Likes	3	10.3%
Five Likes	2	6.9%
Three Likes	1	3.4%
Four Likes	1	3.4%
Dislikes	0	0%
Comments	0	0%

Conclusions, Implications, & Recommendations

The findings of this study revealed that the U.S. Cotton Trust Protocol employs a wide variety of framing techniques and styles. However, this extensive variety has resulted in limited interaction with the

content. Subscribers and viewership tell us that people are aware of the content but are not engaging with it. Past research suggests audience preferences can differ based on background, which leads to varying responses to different communication strategies (Alexander, 2017). In the case of the U.S. Cotton Trust Protocol, this diversity in techniques appears to have hindered the overall effectiveness of their videos, leading to limited interaction.

The hope appeal was the most commonly used emotional appeal among the 28 videos. This indicates that the U.S. Cotton Trust Protocol is focused on appealing to its viewers' aspirations for their farms, families, careers, or futures and fostering a positive emotional connection between the audience and the video content, which can often lead to positive experiences (Stoknes, 2015). This aligns with previous literature from Bain et al. (2016), who said that if hope is communicated in an effective manner, it can lead to positive sustainability practices in the future. Hope appeals can ideally mitigate negative feelings and lead to more positive outlooks on viewers' futures regarding their operations and sustainable practices (Bain et al., 2016; Stoknes, 2015). However, the use of the hope appeal did not appear to resonate with the producer audience, which is evident in the contrast between views and interactions.

Personal narratives were also a frequently used technique in the videos, with producer-oriented narratives being the most common. These narratives share the producers' own testimonials about how sustainability and the U.S. Cotton Trust Protocol specifically have benefited them. These findings align with those of Greene et al. (2019), which demonstrated the benefits of personal narratives in communication strategies. As this was a dominantly used technique, it is clear that relatability and trustworthiness are important to the organization. Despite the use of personal narratives, interactions remained minimal. Previous work by Zebrowski et al. (2023) found that family-focused narratives were influential among a farming audience, indicating that a transition from personal to family narratives could be beneficial for the U.S. Cotton Trust Protocol in fostering engagement. Credible sources also enhance the trustworthiness of video content, and farmers were identified as the most utilized credible source among the videos. Joshi and Joshi (2019) stated that farmers and other producers prefer more formal sources over farmers, which could explain the limited engagement with the farmer testimonials presented by the U.S. Cotton Trust Protocol. Contrarily, findings by Houser et al. (2019) emphasize the importance of farmers as trusted information providers in the agricultural industry. Further research is necessary to determine the contingencies of both findings, and which can be applied in this context.

The most prominent logical appeal used within the videos was rationality. Despite its frequent use, the findings indicate that rational appeals may not resonate strongly with the target audience and could contribute to low engagement. Environmental framing was also frequently found in the videos, indicating a strong focus on the connection between sustainability and environmental issues. On top of the frame, framing style also significantly influences audience engagement (Chong & Druckman, 2007). The U.S. Cotton Trust Protocol's videos demonstrated equal use between episodic and thematic framing styles. This aligns with the work of Iyengar (1996) and Chong and Druckman (2007), which illustrates how these framing styles shape viewer perspectives by combining individual stories with broader contexts. Despite these strategies, the videos have not fostered strong engagement, which is evident in the limited number of likes and comments. This outcome may be due to the framing and stylistic choices present in the videos, which do not appear to have effectively captured the audience's attention.

The implications of this study highlight the potential for the U.S. Cotton Trust Protocol to enhance its impact on both producers and consumers. Based on the information being shared, it will be critical to the future success of these videos for the U.S. Cotton Trust Protocol to be aware of the styles and techniques that impact the videos they produce and share. In order to achieve this, the organization must evaluate and refine the styles and techniques employed in their video content. While current engagement levels are low, these videos can potentially impact the cotton industry in the United States and beyond. By implementing

the recommendations discussed below, the U.S. Cotton Trust Protocol can elevate its video content, fostering greater sustainability and industry-wide influences.

Additionally, it is critical to note that these findings and implications do not just hold true to for the U.S. Cotton Trust Protocol. While these YouTube videos were the primary focus of this study, researchers believe that these conclusions and the recommendations below can be implemented holistically among agricultural-focused engagement videos to ensure higher viewership and success with digital storytelling techniques. Based on these findings, viewer engagement was low. Still, with enhanced techniques and more focus on credible sources that meet the needs ot the desired audience, the U.S. Cotton Trust Protocol and other agricultural outlets can have success with their future digital storytelling strategies.

Recommendations

This study revealed several strategies that would enhance the effectiveness and engagement of U.S. Cotton Trust Protocol videos. First, diversifying the narratives presented in the videos could broaden their appeal to the target audiences. The U.S. Cotton Trust Protocol should consider the use of community, family, and consumer perspectives as new ways to shed light on the effects of adopting sustainable practices. Additionally, expanding the range of credible sources used in the videos could increase engagement. Farmers were the only source found in the analyzed videos, but including outside perspectives like industry experts and public officials could allow the videos to resonate with a bigger audience. Similarly, mixing framing techniques by incorporating social responsibility, economic, and innovative frames with the current focus on environmental issues could paint a more well-rounded narrative that reaches a larger and more diverse viewership.

To build on this study's findings, future research should investigate the emotional impact of video content. While hope was the dominantly used emotional appeal, further investigation of how different emotions influence engagement would provide valuable insights into designing more compelling messages. Framing is often studied broadly but needs to be broken down more intrinsically for a deeper understanding. This research would tell sustainability initiatives if it would be worth their efforts to explore the use of other emotions, such as humor or guilt. Doing so will assist those working in digital communications in the agricultural industry to make informed decisions on the methods used for digital storytelling. Understanding what resonates with the demographic and psychographic characteristics of the U.S. Cotton Trust Protocol's audience is also essential. This research could reveal audience preferences and values, which would enable a more tailored approach to content creation.

Additionally, examination of these videos influences message retention and behavior change, which can help with understanding their long-term effectiveness. Studying message testing by methods such as dial testing would provide very valuable insights into what exactly is catching and retaining producers' attention. By addressing these practical and research-focused recommendations, the U.S. Cotton Trust Protocol can enhance its persuasive strategies, engage with its audience more effectively, and expand its influence on sustainable practices in the cotton industry. Using this emerging data and the U.S. Cotton Trust Protocol as a reference, other sustainability initiatives will also have a model of effective communication strategies.

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