An Exploration of Sustainable Cotton Promotion through Social Media Analytics

Dr. Muzhen Li, Dr. RayeCarol Cavender
Department of Retailing and Tourism Management, University of Kentucky

Keywords: Social Media, Sustainable Cotton, Frame Theory, Co-occurrence Network

Efforts to promote sustainable cotton have been intensifying in recent years, with experts around the world diligently working to minimize the environmental footprint of cotton production. These efforts are multifaceted, focusing not only on reducing water and pesticide use but also on improving soil health and reducing greenhouse gas emissions (Ahmad & Hasanuzzaman, 2020). In a positive finding, the share of cotton produced under major sustainability programs (including Better Cotton, Organic, and Fairtrade) remained stable at 28% of global production (Textile Exchange, 2025). While these certified programs represent an important benchmark for sustainable cotton, it's worth noting they don't encompass all potentially sustainable cotton production. Meanwhile, sustainable cotton producers and retailers are increasingly leveraging social media to educate consumers on the environmental and ethical benefits of sustainable cotton. However, there is a growing gap between customers' increasing awareness of fashion sustainability and the complex/mixed marketing information on social media. Therefore, it is necessary to identify prevalent market message framing, uncover gaps and misleading information/claims related to sustainable cotton in current social media content.

This study employs Frame Theory (Goffman, 1974) as the theoretical foundation to clarify how social media platforms disseminate information related to sustainable cotton. Originating from sociology, psychology, and communication studies, frame theory explores how individuals and groups perceive, interpret, and communicate reality through cognitive structures known as "frames." In communication contexts, framing refers to the strategic presentation of information, emphasizing specific themes, narratives, symbols, or values, to shape audience perception and interpretation. Previous research has applied this theory to analyze protest movements, NGO advocacy, and environmental activism on social media (Vu et al., 2021). Similarly, the marketing of sustainable cotton on social media relies on intentional framing strategies. In this study, frame theory guides the analysis by identifying dominant themes and uncovering popular narratives.

In this study, Instagram was used to explore sustainable cotton marketing through posts tagged with #sustainablecotton, #organiccotton, and #recycledcotton. These hashtags were selected for their prevalence and direct relevance to sustainable cotton narratives. Consumer -generated content was manually excluded, and only posts from brands, retailers, sustainability initiatives, or industry campaigns were retained. After filtering, a total of 335 posts published during January 2024 were analyzed. Two coders independently reviewed the posts to identify recurring themes based on content, tone,

© 2025 The author(s). Published under a Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

and visual framing. Meanwhile, a tag co-occurrence network was utilized to intuitively display the relationship between popular tags and narratives.

In Figure 1, the three tags searched are all highly connected to the tag “sustainablefashion” and “ethicalfashion”, revealing how sustainable/organic/recycled cotton is framed as integral to broader ethical and environmental movements. Meanwhile, hashtags like “regenerativecotton” emphasize agricultural innovation, “cottoncomfort” and “ootd” (Outfit of the Day) pivot to lifestyle, associating sustainable cotton with everyday wearability.

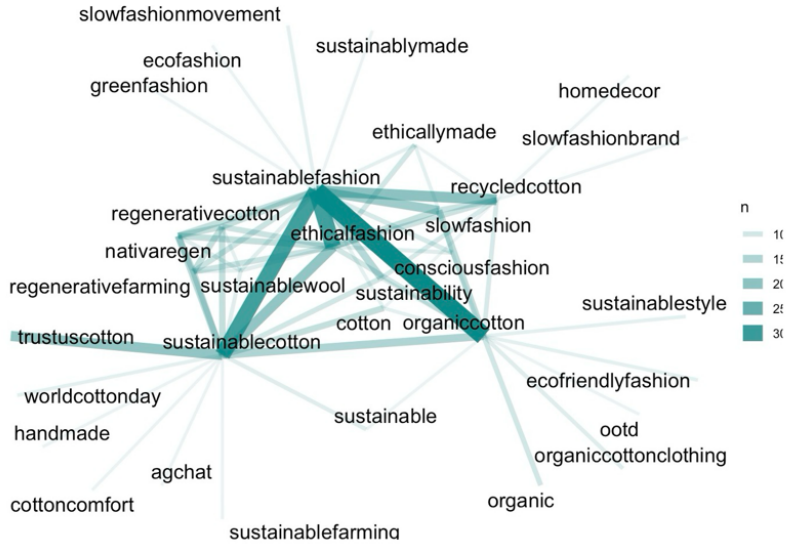

Figure 1. The tag co-occurrence network of sustainable cotton Instagram posts

Overall, four themes were categorized from the manual review analysis. The first theme was **product/brand/wholesaler promotion**. These posts featured fiber, yarn, and fabric producers advertising their sustainable cotton materials to manufacturers at the next stage of the supply chain (i.e., B2B). This category also comprised posts targeting consumers (e.g., B2C), whereby retailers promoted finished products made with sustainable cotton. This theme mainly leverages lifestyle frames to market sustainable cotton across B2B and B2C audiences, using keywords like “soft,” “gentle on skin,” and “slow fashion” to associate sustainable/organic cotton with wellness, comfort, and aspirational minimalism. While environmental frames are utilized, they remain superficial, relying on cursory keywords like “eco-friendly”, “slow fashion”, “circularity” without elaborating on tangible ecological benefits. The second theme, **knowledge spread**, employs environmental frame to educate institutional actors. Most posts were educational messages targeted to the average consumer who is seeking credible information on sustainable cotton. By highlighting terms like regenerative farming (rebuilding soil health), no-till (avoiding plowing to protect soil), and reduced water/energy use, the messaging shows how sustainable cotton can help to reduce harm and footprint from industries. Narratives like environmental footprint and textile waste push companies and governments to think about the full lifecycle of products, encouraging recycling and circularity. The third theme, **cotton farming / raw material production**, employs environmental frame, tailored to cotton producers and farmers, positioning sustainable practices as both innovative and pragmatic solutions to agricultural challenges. The framing selects highly technical terms like vertical farming, no-till farming, regenerative farming, and precision farming to emphasize scientific rigor and operational efficiency, appealing to an audience familiar with agricultural

© 2025 The author(s). Published under a Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

methodologies. The fourth theme, **documentation of sustainable practices**, included businesses at all stages of the production process (i.e., raw materials to finished garments) sharing the sustainable cotton certifications (e.g., Trust Protocol, Better Cotton Initiative) they have obtained, other transparency and traceability standards they have adopted, and any awards or acknowledgements they have received surrounding sustainable cotton.

The findings highlight the range of messaging surrounding sustainable cotton on social media. Companies predominantly use lifestyle and environmental frames to market products, emphasizing aesthetics ("soft," "natural") and broad eco-benefits ("reduced water usage"). However, vague terms like "eco-friendly" often lack ties to certifications (e.g., BCI) or lifecycle data, risking greenwashing by prioritizing feel-good narratives over verifiable sustainability. Educational campaigns, while grounded in environmental frames, frequently omit measurable metrics and reliable references, and rarely address traceability and transparency in the supply chain. The findings help fashion practitioners to think about the frame and social media content when promoting sustainable cotton in a compelling and genuine manner. By balancing storytelling with evidence-based accountability, including clear metrics, biodegradability benefits, traceable sourcing, etc., brands can build trust and empower consumers to make informed choices. Future research will expand data collection to include posts from more social media platforms and incorporate additional hashtag clusters from the tag co-occurrence network (e.g., #trustuscotton, #regenerativecotton, etc.,) to further explore the promotion of sustainable cotton and the potential fashion greenwashing.

References

Ahmad, S., & Hasanuzzaman, M. (2020). *Cotton production and uses. Agronomy, crop protection, and postharvest technologies*. Springer Nature Singapore Pte Ltd.

Goffman, Erving. 1974. *Frame Analysis: An Essay on the Organization of Experience.* New York, NY et al.: Harper & Row

Textile Exchange. (2025, January). The materials market report 2024. https://textileexchange.org/app/uploads/2024/09/Materials-Market-Report-2024.pdf

Vu, H. T., Blomberg, M., Seo, H., Liu, Y., Shayesteh, F., & Do, H. V. (2021). Social media and environmental activism: Framing climate change on Facebook by global NGOs. *Science communication*, 43(1), 91-115.

© 2025 The author(s). Published under a Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.