

REWEAVING SUSTAINABILITY:

THE CONVERGENCE OF TEXTILE INNOVATION, AGRICULTURAL WASTE
AND ETHICAL MARKETING



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Reweaving Sustainability: The Convergence of Textile Innovation, Agricultural Waste and Ethical Marketing



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Preface

The global textile and fashion industry stands at a critical crossroads. While it drives creativity and economic growth, it is also among the most resource-intensive and environmentally damaging industries worldwide. Rising textile waste, dependence on virgin raw materials, opaque supply chains, and misleading sustainability claims expose the limits of the prevailing linear production model. *Reweaving Sustainability: The Convergence of Textile Innovation, Agricultural Waste and Ethical Marketing* responds to these challenges directly, rejecting superficial solutions and symbolic commitments.

This book advances a clear position: genuine sustainability in textiles cannot be achieved through isolated interventions. It demands a systemic transformation that integrates textile innovation, strategic utilization of agricultural waste, and ethical marketing into a unified and accountable framework. Agricultural residues—often treated as disposal burdens—are examined here as valuable resources capable of reshaping fiber production, reducing environmental pressure, and creating economic value for farming communities. When embedded within circular systems, agricultural waste becomes a driver of regeneration rather than pollution.

Innovation is approached as necessity, not novelty. Advances in bio-based fibers, processing technologies, and circular design offer measurable pathways to reduce water consumption, energy use, and chemical dependency. Yet innovation alone is insufficient. Without transparency and responsibility, it risks reinforcing greenwashing. Ethical marketing is therefore positioned as a core pillar of sustainability—not as promotional rhetoric, but as a mechanism for honesty, traceability, and informed consumer engagement.

Written for students, researchers, industry professionals, policymakers, and sustainability practitioners, this volume bridges theory and practice through critical analysis, applied examples, and future-oriented perspectives. It challenges readers to move beyond sustainability as a slogan and toward sustainability as a system to be deliberately designed and governed.

Ultimately, *Reweaving Sustainability* argues that lasting change in textiles will occur only when innovation, agricultural integration, and ethical communication are aligned to reshape how textiles are produced, marketed, and consumed.

Acknowledgement

This book is a collective outcome of shared effort, critical dialogue, and interdisciplinary collaboration. As authors, we acknowledge that Reweaving Sustainability: The Convergence of Textile Innovation, Agricultural Waste and Ethical Marketing would not have been possible without the intellectual and practical contributions of many individuals and institutions.

We express our sincere gratitude to the academic community—researchers, scholars, and educators—whose rigorous work in sustainability studies, textile science, circular economy, and ethical marketing provided the conceptual and empirical foundation for this volume. Their research challenged conventional thinking and pushed us to move beyond superficial sustainability narratives toward evidence-based analysis.

We are deeply thankful to industry professionals, designers, material innovators, and sustainability practitioners who shared their experiences and insights with honesty and critical reflection. Their engagement helped ground this book in real-world practices, limitations, and opportunities, particularly in the emerging field of agricultural waste-based textile materials.

We also acknowledge farmers, agricultural researchers, and material developers whose work in valorizing agricultural residues demonstrates the practical potential of regenerative and circular systems. Their contributions highlight the importance of linking textile innovation with rural livelihoods and environmental responsibility.

We extend our appreciation to the institutions, libraries, and research platforms that supported our work by providing access to essential data, literature, and interdisciplinary resources. Finally, we thank our families, colleagues, and peers for their patience, encouragement, and constructive feedback throughout the research and writing process. While this book reflects a shared vision and effort, any remaining limitations are solely our responsibility as authors.

Mr. Charanpreet Singh
Ms. Tejasvi Chaudhary
Ms. Rohini Mandiyal
Ms. Neha
Ms. Jasneet Kaur

About the Authors



Mr. Charanpreet Singh is a seasoned fashion education professional with 21 years of combined teaching and industry experience. An alumnus of NIFT, New Delhi, he brings a rich blend of academic excellence and practical industry expertise to his role as Head of the University School of Fashion Designing.

Over the course of his career, Mr. Singh has worked extensively in the Design Studio environment, gaining hands-on exposure to garment development, textile techniques, trend research, and product innovation. His industry background strongly informs his academic leadership, enabling him to bridge the gap between creative learning and real-world design practice.

A passionate advocate of sustainability in fashion, he has dedicated significant research to textile innovation, agricultural waste utilization, and ethical marketing systems. His academic initiatives promote responsible fashion practices, circular design thinking, and future-forward textile solutions for the next generation of designers.

In *Reweaving Sustainability: The Convergence of Textile Innovation, Agricultural Waste, and Ethical Marketing*, Mr. Singh brings together his professional insights, research understanding, and vision for a sustainable fashion ecosystem. His leadership continues to inspire students, educators, and industry professionals to adopt environmentally conscious and ethically aligned design philosophies.



Tejasvi Chaudhary, an assistant professor in the department of fashion design at Rayat Bahar Professional University, Hoshiarpur, Punjab and a doctoral researcher in the Department of Clothing and Textiles at Banasthali Vidyapith, Jaipur, Rajasthan, India. I hold both B.Sc. and M.Sc. degrees in Home Science (Clothing and Textiles) from Banasthali Vidyapith. My academic journey has been dedicated to exploring innovation, sustainability, and technology within the textile and fashion domain.

With a teaching experience of four years, I have served as

a Research Associate in the Department of Clothing and Textiles at Banasthali Vidyapith for one year and as an Assistant Professor at Rayat Bahra Professional University, Hoshiarpur, Punjab for three years. These roles have allowed me to engage in both academic instruction and research guidance, fostering my interest in interdisciplinary learning and applied textile innovation.

My research focuses on the integration of artificial intelligence in fashion and textile design, particularly its potential to enhance creative design processes, improve production efficiency, and support sustainable development. I have also gained valuable industry exposure through internships at Rainbow Fab Art Pvt. Ltd. and Nisan Exim, Ahmedabad, where I developed practical expertise in fabric processing, printing, and garment construction.

I have actively participated in numerous national and international conferences and workshops on research methodology, textile innovation, and fashion technology, which have broadened my academic and professional perspective. Through my ongoing research, I aim to contribute to the advancement of AI-driven sustainable practices and technological innovation in the global textile and apparel industry.



Rohini Mandiyal, an assistant professor in the department of fashion design at Rayat Bahra Professional University, Hoshiarpur, Punjab. I hold both B.Sc. in fashion designing and M.Sc. degrees in fashion merchandising from Kanya Maha Vidyalaya, Jalandhar, Punjab. With a deep passion for creativity and sustainability in fashion, I aim to inspire my students to merge traditional craftsmanship with modern design thinking.

With a teaching experience of one and a half years, I have served as Assistant Professor at Rayat Bahra Professional University, Hoshiarpur, Punjab for one years. These roles have allowed me to engage in both academic instruction and research guidance, fostering my interest in interdisciplinary learning and applied textile innovation.

My research focuses on the integration of artificial intelligence in fashion and textile design, particularly its potential to enhance creative design processes, improve production efficiency, and support sustainable development. I have also gained valuable industry exposure through internships at Innovative Knits, Mohali, Chandigarh.

I have actively participated in numerous workshops on research methodology, and fashion technology, which have enriched my academic insight and broadened my professional perspective.



Neha, a dedicated fashion educator and creative professional with a strong foundation in both academic excellence and experience. I completed my Bachelor's and Master's degrees in Fashion Designing from Prem Chand Markanda SD College for Women, Jalandhar, where

I developed a deep understanding of garment construction, textiles, illustration, and fashion

aesthetics. With over 1.5 years of experience as an Assistant Professor and 8 years of experience running my own fashion boutique, I bring a unique blend of practical expertise and teaching skills to my students. My boutique experience has strengthened my craftsmanship, design sense, and understanding of client needs—qualities I carry into my classroom to provide real-world learning.

I am currently working at Rayat Bahra Professional University, Hoshiarpur, where I aim to guide students towards creativity, confidence, and strong technical skills. My teaching specialties include:

- Garment Making
- Fashion Illustration
- Crafts and Creative Techniques
- Hand Printing and Surface Ornamentation

I believe that fashion is a powerful medium of expression, and my mission as an educator is to inspire

students to explore their creativity while mastering the technical skills required in the fashion industry. Through my academic journey and entrepreneurial experience, I strive to build a learning environment that is practical, motivating, and future-focused.



Ms. Jasneet Kaur a passionate fashion designer, educator, and creative professional dedicated to promoting innovation, craftsmanship, and sustainability in the fashion industry. I completed both my Bachelor's and Master's degrees in Fashion Designing from Sant Baba Bhag Singh University, Jalandhar, where I built a strong foundation in garment construction, textile design, illustration, and fashion merchandising.

Alongside my studies, I began working as a Fevicryl Certified Professional (FCP) in 2022, which allowed me to gain hands-on experience in surface ornamentation, fabric painting, craft techniques, and conducting creative skill-based workshops.

Currently, I am working as an Assistant Professor in the Fashion Designing Department at Rayat Bahra Professional University. In my role as an educator, I aim to inspire students, encourage design thinking, and help them strengthen their creative and technical skills through practical learning.

I believe that fashion is a powerful medium of expression, culture, and storytelling. Through my journey as a designer and mentor, I strive to contribute to a more mindful, responsible, and innovative fashion community.

Table of Contents

Chapter 1	1 – 21
Foundations of Sustainable Textiles	
Chapter 2	22 – 41
Agricultural Waste as a Resource	
Chapter 3	42 – 58
Material Innovation and Fiber Development	
Chapter 4	59 – 78
Sustainable Dyeing and Finishing Technologies	
Chapter 5	79 – 98
Circular Manufacturing and Waste Management	
Chapter 6	99 – 118
Life Cycle Assessment and Environmental Impact	
Chapter 7	119 – 141
Ethical and Transparent Marketing	
Chapter 8	142 – 159
Digital Technologies Driving Sustainability	
Chapter 9	160 – 178
Business Models for Sustainable Innovation	
Chapter 10	179 – 192
Future Directions and Global Opportunities	

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ABOUT THE BOOK:

Reweaving Sustainability: The Convergence of Textile Innovation, Agricultural Waste, and Ethical Marketing examines how the textile and fashion industry can move from symbolic sustainability to practical, accountable change. The book explores the use of agricultural waste as alternative textile resources, evaluates material innovations and circular production models, and critically addresses the problem of greenwashing through ethical marketing practices. Integrating insights from textile science, sustainability studies, and marketing ethics, this book offers a realistic framework for researchers, designers, educators, and industry professionals seeking measurable and responsible approaches to sustainable textiles.



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