



# Cotton Incorporated



Report of Cotton Incorporated  
to the Secretary's Office

Mid-Year  
2024

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## OVERVIEW OF CONTENTS

Each year Cotton Incorporated prepares a formal Strategic Plan\* that covers the key principles that guide the Company's long-range activities. The long-term demand goals are:

- ▶ **Long-term Global cotton demand of 132 million bales by 2032/33**
- ▶ **U.S. cotton demand and production to 19 million bales by 2032/33**

In order to meet these goals, specific strategic objectives are outlined for each of Cotton Incorporated's four Operating Committees and related subdivisions:

- ▶ **Agricultural Research Committee**
  - Agricultural and Environmental Research
  - Sustainability
- ▶ **Research and Development Committee**
  - Fiber Competition: *Fiber Quality Research*
  - Fiber Competition: *Cotton Management System (EFS®)*
  - Product Development and Implementation (PDI)
- ▶ **Global Supply Chain Marketing Committee**
  - Global Supply Chain Marketing
  - Importer Support Program
- ▶ **Consumer Marketing Committee**
  - Advertising, Corporate Communications, and Brand Partnerships
  - Corporate Strategy and Insights (CSI)

Operating Committees determine tactics and activities to meet the strategic objectives identified for their program area or divisions within their program area and provide deliverables of their activity to the Board.

**This bi-annual report includes the following sections:**

- ▶ **Executive Summary:** Overview of year-to-date progress report toward achieving Cotton Incorporated's mission and strategic objectives, organized by program committee and its related divisions.
- ▶ **Report of Activities by Program Committee and Strategic Objectives:** Detail of year-to-date progress report toward achieving Cotton Incorporated's mission and strategic objectives, organized by Program Committee and its related divisions.
- ▶ **Explanation of Terms and Activities:** Summary descriptions of ongoing projects and key terminology used to explain activities within each Program Committee and its divisions are included as a reference guide.

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\*Please refer to page 1 of the 2024 Plan & Proposed Budget Book for complete details on Cotton Incorporated's current strategic plan.



# Agricultural Research Committee

## Executive Summary

### Agricultural & Environmental Research (AERD)

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The Agricultural and Environmental Research Department (AERD) manages the program area that most directly influences U.S. cotton producers. Its unique mission is to improve the profitability of U.S. cotton production by funding the creation of agricultural innovations and their adoption by cotton producers.

AERD has five key strategic areas for 2024:

- ▶ Pest Management,
- ▶ Cottonseed,
- ▶ Sustainability Support,
- ▶ Emerging Technologies, and
- ▶ Genomics

For pest management, AERD regularly works on delivering strategies that will promote profitability, sustainability, and conservation. Research is ongoing to study the genetics/physiology of herbicide resistant weeds. This research may ultimately allow for reversal of herbicide resistance, decreased weed seed viability, or identify other weed life cycle vulnerabilities.

Entomology research is focusing on improving thresholds, scouting, insecticide recommendations, and addressing resistance to Bt proteins and conventional insecticides. Pathology research is focusing on solutions for FOV4, target spot, areolate mildew, nematodes, as well as current and emerging seedling disease threats. New research on invasive pest species as well as damage caused by whitetail deer was initiated this year.

Cotton Incorporated's objective for the cottonseed program is to add value to cottonseed through research and promotion. Cottonseed research has continued to focus on three key areas: human nutrition, animal nutrition, and oil content and quality. Cottonseed oil (CSO) has been of key interest, and the program is investigating the amount humans would need to consume to see blood lipid outcomes, impacts on inflammation, and the underlying mechanism.

Sustainability support runs across all areas of AERD research, but notably, research on optimizing management strategies for soil health as well as water and nutrient use efficiencies is underway. For emerging technologies, drone applications, detect-n-spray, low drift potential applicators for weed control are being evaluated as are machine vision tools to detect mechanical damage of planting seed and plastic in the field and ginning process. Opportunities to increase automation across the cotton production process are also being evaluated. Finally, for genomics, efforts are underway to make the cotton pangenome more breeder friendly and develop FOV4 resistant germplasm. This pangenome will replace TM-1, the historical reference used in Upland cotton research, to drive cotton improvement for years to come.

## Sustainability Division

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The Sustainability Division remains focused on its primary goal of enhancing the cotton industry's sustainability reputation. We accomplish this objective through three primary areas of focus: 1) supporting the U.S. Cotton Trust Protocol, 2) conducting research to improve cotton sustainability, and 3) communications and engagement to improve cotton sustainability and sustainability reputation. Focusing on these core areas solidifies cotton's reputation as a reliable, strong, and competitive leader in sustainability across the supply chain.

The Division collaborates with the U.S. Cotton Trust Protocol (CTP) to achieve the U.S. cotton industry's ten-year sustainability goals. This collaboration is crucial for reducing cotton's environmental footprint, providing measurable metrics, and sharing results throughout the supply chain. Actively supporting the CTP and the U.S. Climate Smart Cotton Program in efforts to enroll growers, promote climate-smart agricultural practices, and develop a carbon inset market for member brands and retailers increases profitability for participating growers by providing additional revenue streams.

Additionally, we are expanding our research on cotton circularity to include alternative end-of-life solutions through collaboration with Product Development and Implementation on initiatives such as cotton composting, bioenergy, biochar, and biosequestration.

Our ongoing engagement in the development of new sustainability standards enables us to shape the narrative and metrics around cotton's role in the circular economy. In working with Consumer Marketing and Global Supply Chain Marketing, we effectively communicate sustainability messages through online webinars and continuous content updates on CottonToday and CottonWorks™. These efforts reinforce Cotton Incorporated's leadership in sustainability and help secure vital roles in organizations developing cotton sustainability tools and metrics.



# Agricultural Research Committee

Mid-Year 2024

## Agricultural Research

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### Strategic Objective 1: Increase the profitability of U.S. cotton production

#### Tactic: Research to Protect Cotton Production from Pests and Improve Cotton Production

Program Activity: Production profitability.

##### Current Status

- ▶ Research is underway to understand areolate mildew and target spot impact on cotton production and current varieties which also leverages a USDA initiative, NPTMI, to look at predictive modeling.
- ▶ An assessment of production impacts, host and pathogen genetics, overwintering potential, and rotation is underway for seedling pathogens such as Xylaria.
- ▶ A nematode working group is being formed to define current and future nematology needs for cotton and assess opportunities to leverage federal support for regional projects.
- ▶ Projects are ongoing aimed at assessing pathogenicity of FOV4 within the host to bolster breeding efforts for resistant germplasm.
- ▶ Application technologies, such as drone applications, detect-n-spray, low drift potential applicators for weed control and/or reduction of off-target movement, and practical mitigation strategies are being evaluated. Some of these projects are jointly funded by the United Soybean Board.
- ▶ Machine vision tools are showing promise to provide an automated and objective rate of visible mechanical damage of planting seed.
- ▶ Improvements have been made to the DSSAT crop growth model and is being used to optimize water management under current and future climate scenarios.
- ▶ Research is ongoing on the genetics/physiology of herbicide resistant weeds. This may allow for reversal of herbicide resistance, decreased seed viability, or identify other weed vulnerabilities.
- ▶ Evaluation of planting seed quality characteristics that are better predictors of in-field stand establishment, including modifications to current seed quality testing methods, are underway.
- ▶ Soil health research is ongoing to understand the value in integrated weed management, the impact on N recommendations, water use efficiency, and carbon sequestration.
- ▶ Research is ongoing to identify and more feasibly quantify root growth and development which could impact water and nutrient uptake as well as diseases and nematodes.

- ▶ Ongoing studies are focused on improving N-use efficiency in cotton, thus decreasing input costs and improving cotton's sustainability.
- ▶ A scientific manuscript that documents deer feeding injury and economic damage to cotton is ready for submission in June.
- ▶ Research projects concerning deer were established in three states that include resistance of current varieties, effects of agronomic and pest management strategies on feeding injury, establishing economic injury levels, testing exclusion methods and repellents, and estimating population parameters in problem areas.
- ▶ A working group on bollworm resistance strategies formed and met to discuss areas of overlap between cotton, corn, and soybean. Plans were made to secure funding from federal sources and to identify research priorities by region and crop.
- ▶ Prior and existing entomology research projects prepared producers to manage thrips with new risk-informed strategies and technologies.
- ▶ Invasive species were documented, and future ranges predicted, across multiple regions.
- ▶ Two FOV4 resistance genes, both required for robust resistance, have been identified.
- ▶ A working version of the pangenome has been developed and a second NIFA grant will be submitted this year to make it more breeder friendly and add additional genomes.
- ▶ Trials have been planted to collect another year of data at six locations to better understand the genetics of lint and oil content. The 2023 fiber data is being analyzed and the oil data is 50 percent complete.

**Tactic: Research to Increase the Value of U.S. Cottonseed and Other Gin Coproducts**

Program Activity: Cottonseed research.

Current Status

- ▶ AERD staff continues to work closely with Consumer Marketing staff to provide cottonseed research-based information and recommendations. Research is underway to understand areolate mildew and target spot impacts on cotton production and current varieties which also leverages a USDA initiative, NPTMI, to look at predictive modeling.
- ▶ Cottonseed oil nutrition research continues to make progress with a focus on investigating the dose necessary to see blood lipid outcomes, inflammation, and the underlying mechanism.
- ▶ The cottonseed oil and protein analysis setup is complete and the laboratory is ready to provide analytical services.
- ▶ Research about increasing dietary inclusion of whole cottonseed in dairy cows has been published in a peer-reviewed journal.

- ▶ Whole cottonseed and cottonseed meal inclusion in beef and dairy cattle rations continues.
- ▶ Projects on gene editing technologies for cottonseed oil yield and quality improvement while keeping desirable fiber quality continue to make progress.

### **Tactic: Research to Improve Harvesting and Ginning, Including Contamination**

Program Activity: Harvesting and ginning.

#### Current Status

- ▶ A new technology to detect volatile emissions that precede combustion during cottonseed storage has been identified and an affordable sensor looks feasible.
- ▶ Measurements that provide the most benefit in optimizing gin efficiency have been identified and results are being communicated at the 2024 NCGA gin schools.
- ▶ Case studies for scenarios are nearing completion that will help identify the most cost effective approaches for future harvesters.
- ▶ A new project has been initiated with Mississippi State University to develop an autonomous ground vehicle to remove unwanted plastic from the field.
- ▶ A standard to facilitate sharing of data in the ginning process is nearing completion and will be compatible with the AgGateway’s data standard.
- ▶ Progress continues in the development of alternative harvest platforms that will be more scalable to planted cotton acres.
- ▶ Open-source software to support the use of RFID technology to track modules from the field and support fiber quality mapping is largely complete and will be available for download in 2024.

### **Tactic: Administering and Funding the State Support Program**

Program Activity: State Support Committee

#### Current Status

- ▶ Maintained a robust and producer profitability focused State Support program.

## **Sustainability Division**

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### **Strategic Objective 2: Improve the reputation of U.S. Cotton production.**

#### **Tactic: Support U.S. Cotton Trust Protocol**

Program Activity: U.S. Cotton Trust Protocol Support.

#### Current Status

- ▶ U.S. Cotton Trust Protocol (U.S. CTP) support has continued in the first half of 2024. To date, over 1,100 producers have signed up for Level 1 (U.S. CTP Enrollment) of the U.S. CTP’s Climate Smart Cotton program resulting in over \$1.7 million delivered to producers for their engagement.



## **Tactic: Research to Improve Cotton Sustainability**

Program Activity: Research and LCA Data.

### Current Status

- ▶ The current project to create a life cycle inventory and assessment of U.S. cotton from seed to bale continues to be refined using additional background information, allocation models, and scenario analyses.
- ▶ A draft literature review publication has continued which aims to highlight the variety of ways that cotton and cellulose fibers naturally biodegrade.
- ▶ The Quail Forever project continues to provide technical assistance to growers interested in habitat conservation across the cotton belt by leveraging expertise from the team's precision agriculture and conservation specialist. The project remains focused on providing alternative ways to merge grower profitability and habitat conservation.
- ▶ The Texas A&M Cotton Soil Health and Greenhouse Gas (GHG) Modeling Project is actively investigating the impact of conventional and conservation production practices on soil health, GHG emissions, and cotton yield through comprehensive field studies and simulation modeling. The analysis focuses on understanding the trade-offs and benefits of these practices to enhance the sustainability of Texas cotton production.
- ▶ The Sustainability Division has officially confirmed its membership in the Efficient Fertilizer Consortium (EFC), a public-private collaboration aimed at advancing novel fertilizer products with improved agronomic performance and reduced environmental impact.
- ▶ Denim laboratory and industrial-scale compost research with Cornell University has been published in the journals *BioResources* and *Compost Science & Utilization*. These publications continue to demonstrate composting is a viable circular pathway for cotton textiles.
- ▶ The Advancing Circular Textiles project with UC Merced recently kicked off a project focused on determining the optimal recipe for composting cotton textiles with green, or food, waste at both lab and field scales and in home compost settings. The project also seeks to evaluate the impacts on safety and effectiveness of the compost.
- ▶ Modeled rates of fragmentation and degradation of macroplastics into microplastics in Marine Impacts in Life Cycle Assessment (MarLCA) project by
  - Creating characterization factors for LCA of fragmentation and degradation rates of plastics; and
  - Collecting data on weathering of macroplastics to fit models.
- ▶ The Cottonseed LCA project seeks to evaluate the environmental benefits of using more cottonseed in cattle feed. The project is in the screening phase in which the team is refining data inputs and completing the life cycle inventory for dairy and slaughter cattle.

- ▶ The Sustainability Division and other research collaborators recently published a paper in *Nature Communications*, titled, "The global apparel industry is a significant yet overlooked source of plastic leakage." The research shows that the apparel industry is a major contributor to plastic pollution, releasing 8.3 million metric tons (14 percent of all sectors) annually. Synthetic apparel alone is responsible for 7.4 million metric tons of this pollution, the majority of which comes from the synthetic apparel itself (e.g., macroplastics). The study emphasizes the importance of using natural fibers like cotton, designing durable products, and enhancing reuse, remanufacturing, and recycling to reduce this impact.

### **Tactic: Communication and Engagement to Improve Cotton Sustainability**

Program Activity: Communications, Memberships, and Outreach.

#### Current Status

- ▶ Sustainability communications, in collaboration with Corporate Communications, has focused on creating and maintaining content for the CottonToday website. SEO and SEM performance were enhanced, using social media and LinkedIn® campaigns to drive traffic to the website. Additionally, communications have included monthly blog posts, e-mail marketing content, and earned media campaigns.
- ▶ Sustainability Division representatives continued engagement with the Higg Material Sustainability Index (MSI) Cotton Member Expert Team (MET) to refine LCA methodologies for creating accurate cotton fiber datasets by focusing on data requirements and modeling approaches. The effort was a multi-stakeholder initiative designed to address challenges in agricultural data collection and standardization. The project team recently completed a three-year engagement resulting in the draft publication titled, "Industry Aligned Life Cycle Assessment Methodology and Requirements for Creating Cotton Fiber Datasets for the Higg Product Tools."
- ▶ A staff member is co-chair of the American Center for Life Cycle Assessment (ACLCA) Industry Committee and an ACLCA board member.
- ▶ Contributed final comments to the first three published ISO circular economy standards.
- ▶ Guided the U.S. Technical Advisory Group consensus process on the next two draft international standards to support the circular economy.
- ▶ Presented ACLCA webinar on ISO circular economy standards and LCA to over 100 live attendees out of 350 registered.
- ▶ Provided comments on ASTM guide on principles of circular design second ballot.
- ▶ A staff member is chair of the ASTM Textile Sustainability Subcommittee and leading a task group to identify areas for new circular economy standard development.
- ▶ Reviewed newly published ISO standards for Circular Bioeconomy Systems Institute workgroup and shaped future work team efforts.

- ▶ Reviewed and commented on Apparel and Footwear Product Environmental Footprint (PEF) Category Rule v. 2.0.
- ▶ Met with PEF Technical Secretariat to address about 900 public comments and make any needed changes to methodology.
- ▶ A CottonWorks™ webinar was hosted in collaboration with the Global Supply Chain Marketing division titled, "Beneath the Currents: Advancing the Understanding of Cotton and Synthetic Microfiber Impact." The webinar highlighted recent research from NC State University on the biodegradability of cotton microfibers compared to commonly flushed materials such as toilet tissue and polypropylene wipes, further demonstrating cotton's environmental advantage in aquatic environments.
- ▶ The Sustainability Division continues to actively engage with NGO (Non-Governmental Organization) organizations such as Field to Market, Cascale (formerly the Sustainable Apparel Coalition), and Textile Exchange to ensure cotton is fairly represented and evaluated. Our collaboration ensures the most up-to-date cotton data is utilized in emerging initiatives being developed by these organizations.

# Agricultural Research Committee

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## Explanations of terms and activities

- ▶ **Cottonseed Research:** The objective of this research is to eliminate the barriers to cottonseed usage. Activities include research to eliminate gossypol; testing the cottonseed nutrient profile to determine natural variation in germplasm and evaluating this germplasm for adding value and reducing input potential; and developing new products and utilizing advances with low-gossypol cottonseed products.
- ▶ **Disease Management:** The minimization of plant pathogens as significant economically damaging pests in cotton production.
- ▶ **Insect Pest Management:** The objectives of this activity are twofold: (1) Develop management recommendations for insect pests that meet the needs of a changing farm landscape using integrated pest management (IPM) strategies, and (2) Support boll weevil and pink bollworm eradication programs with research and technical expertise.
- ▶ **Weed Management:** The minimization of weeds as significant, economically damaging pests in cotton production.
- ▶ **ISO:** International Organization for Standardization; TC 38 – Technical Committee 38 on Textiles; TC323 – Technical Committee 323 on Circular Economy.
- ▶ **ANSI:** American National Standards Institute – Official member of ISO for U.S., coordinator of U.S. standards' work and publisher of American National Standards.
- ▶ **TAG:** Technical Advisory Group – ANSI- Accredited group that coordinates technical work by U.S. experts and companies involved in ISO.
- ▶ **LCA:** Life Cycle Assessment – Methodology for converting inputs and outputs of a process into impacts to the environment; described in multiple ISO standards.
- ▶ **SAC:** Sustainable Apparel Coalition – Organization that has developed a set of metrics, known as the Higg Index, for the apparel and footwear industries.
- ▶ **NIST:** National Institute of Standards and Technology
- ▶ **PEF:** Product Environmental Footprint- Like LCA, but using specific rules to assess impacts, part of the European Union's Single Market for Green Products Initiative.
- ▶ **CE:** Circular economy.



# Research and Development Committee

## Executive Summary

### Fiber Competition

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For Quality Research, the report highlights activities related to traceability, Fiber of the Future, and contamination. For traceability, a cooperative research and development agreement between Customs Border Protection (CBP) and Cotton Incorporated to evaluate the ability of isotope testing to identify fiber origin was established, and research efforts are underway. Ongoing efforts include obtaining additional raw fiber samples. The research agreement with Clemson University for data analysis has also been executed.

In the Fiber of the Future program, efforts continued to evaluate new length-based measurements, gather data to understand genetic associations, DNA extraction and sequencing, and test a new fiber mounting medium for fineness. The report also provides progress in evaluating fiber quality at the gin. The ongoing evaluations to mitigate contamination issues involved significant progress in refining the color camera system and transitioning the Visual Inspection Single-Node (VISN) system into the implementation phase. Additionally, efforts to develop ultrasonic sensors to detect plastic with better accuracy are underway.

For the Product Evaluation Laboratory, the report provides counts of testing for research and implementation efforts supporting both the Agricultural and Environmental Research and Product Development and Implementation divisions. Staff continued with routine proficiency programs in fiber, yarn, and fabric and worked with standards organizations. Details on the specific testing supporting research and implementation activities are given in the report.

For Engineered Fiber Selection® (EFS®), Programming efforts continued the maintenance phase of the software with general fixes, customer requests, and report upgrades for six programs. Additionally, staff have made progress in creating a 64-bit version of the database library and replacing older reporting software with a new, better-supported product. Quality assurance testing has been completed on new contract status reports, inventory reports, and program updates. Efforts are ongoing to add database support for linking lot yarn identifiers to laydowns and provide the ability to import and scan documents into a database linked to shipment and laydown identifiers.

For EFS® Technical Service, activities include providing technical service to licensees, conducting site visits, and maintaining user documentation. Marketing efforts focused on educating and promoting the use of High Volume Instrument (HVI®) data by adding additional content to the myEFS Support Portal and hosting an HVI educational class for one licensee. Time has been spent creating various marketing initiatives to celebrate the 40<sup>th</sup> anniversary of the EFS® program. Marketing held over 22 virtual and in-person meetings with potential licensees in key markets.

## Product Development and Implementation (PDI)

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The key priorities for Product Development and Implementation (PDI) in 2024 were developed based on company-wide priorities and include:

- ▶ Cotton Fiber Enhancement
- ▶ Sustainability and Circularity
- ▶ Cotton versus Synthetics
- ▶ Engagement and Support

The topic of traceability was broken out of the Cotton Fiber Enhancement initiative and was reported together with Fiber Competition. In preparation for the isotopic study conducted in conjunction with Customs Border Protection (CBP), the needed instruments and consumables for preparing the fiber samples were acquired. A contractor was hired to work with a Cotton Incorporated staff scientist and sample handling experiments have been conducted.

Sustainability and Circularity begins with the Cotton to Sugar scaling trials. A consultant was hired to improve the efficiency of the enzymatic phase, and a large U.S. brand has begun supplying cut waste for sugar conversion. Ten outside research projects, all of which are focused on sustainability and circularity, are being managed this year. Collaboration is ongoing with an international chemical company on the development of biobased TOUGH COTTON™ technology. In the area of low water applications, trials were run here and abroad on atomized dyeing and on spray and foam finishing. A new publication comparing the biodegradation of cotton to wood fibers used in toilet paper was published. Staff is working with a university developing biodegradable cotton apparel collections. Research centered around the use of recycled cotton in both batting/insulative materials as well as in denim is underway.

The priority of Cotton Fiber Enhancement was revisited with a focus on contamination mitigation. Fiber Processing (FP) continues to collaborate with USDA and industry, processing bales “spiked” with pieces of module wrap through the TST5 cleaner. The FP lab has initiated spinning and knitting trials to understand how contamination affects downstream processes. Staff from FP also taught the finer points of contamination mitigation at the USDA Gin Schools in Texas, Georgia, and New Mexico.

For the Cotton versus Synthetic initiative, Product Development (PD) released two FABRICAST™ collections with 54 inspirational fabrics. These included UV protection fabric for outdoor, textured and flat fabrics featuring innovative dye applications, non-denim fancy twills and textural doobby weaves, insulative suiting look and chunky flat knits. Ozone and laser were also used to create color gradation and dye resist effects. Metrics on 2024 FABRICAST™ collection sample requests were shared showing the allocation of requestors. A cotton-rich knit project is in development and aimed at a major shapewear brand. Research on zero-cotton denim yields data favorable to cotton. The formula for non-fluorine Sweat Hiding™ technology was finalized and the non-fluorine STORM COTTON™ technology for denim was improved. A durable softener technology is in development. Evaluation on the impact of cotton fabric variables with and without UV treatment was completed and presented at a conference. Technical Support and Implementation (TSI) are tracking high interest in TOUGH COTTON™ technology and have received over 575 samples from industry trials run globally. Trials for TransDRY® and STORM COTTON™ technology are growing and

RESTech COTTON™ technology is garnering interest with U.S. brands. Technical service was provided to mills in the Americas and Asia and several Cotton Incorporated technology implementation trials are underway in the Americas.

In the area of Engagement and Support, staff presented at several U.S. conferences and attended major trade shows in the U.S. and abroad. Meetings were held with brands, mills, equipment companies, chemical, and material providers. The FABRICAST™ collection was presented over a two-week trip to Asia as the PD team continues to support GSCM with collection hangers, which were shown in both physical and digital form to the industry. Staff were featured in trade journals promoting technology developments and information provided to support social media content.



# Research and Development Committee

Mid-Year 2024

## Fiber Competition

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**Strategic Objective 1: Support research focused on enhancing the accuracy of measurements, utilizing diverse datasets, and data analysis to improve fiber quality and address industry challenges**

**Tactic: Quality Research**

Program Activity: Traceability.

### Current Status

- ▶ A cooperative research and development agreement (CRADA) between Customs Border Protection (CBP) and Cotton Incorporated to evaluate the ability of isotope testing to identify origin was executed on March 14. Cotton Incorporated's role is to provide raw fiber samples, processed samples, blended samples, and data analysis. CBP's role is to do isotope testing.
- ▶ A proof of concept set of raw fiber samples, taken from U.S. bales, was delivered to CBP on March 22. CBP is working on a cleaning protocol for testing samples with assistance from Cotton Incorporated staff. Staff have set up a recurring meeting to keep this effort at CBP at the forefront of their minds.
- ▶ Staff worked with public breeders to obtain a larger set of raw fiber samples, of which the first season set has been received, and the second season plantings are planned.
- ▶ A research agreement was set up with Clemson University for data analysis of the isotope ratios that CBP will provide.
- ▶ Staff worked with Product Development and Implementation members to determine what cleaning procedures were appropriate for the raw fiber samples and to outline the experimental design for the processed samples.
- ▶ Staff aided Global Supply Chain Marketing with coordinating the objectives and evaluating the gathered output of the consultant hired to work on the Importer Support Program (ISP) Traceability project.
- ▶ Staff participated in various webinars and workshops on forced labor.

Program Activity: Fiber of the Future.

### Current Status

- ▶ The ongoing evaluation of the new length-based measurements from the High Volume Instrument (HVI®) with a commercial breeding program is continuing, with additional samples from previous testing being replanted for spinning trials. The first manuscript is complete.



- ▶ Completed calibration in both labs on all machines; testing using the new length-based measurements has been rolled out to multiple research programs.
- ▶ Large field trials for the exotic nested associated mapping (NAM) sub-populations were planted in three diverse environments to ensure that the fiber phenotype necessary for developing the database to mine for fiber fineness has been comprehensively created. Testing is underway from the 2023 growing season.
- ▶ The evaluation of genetic associations is ongoing, intending to confer fiber length and fineness from *G. barbadense* while understanding the role of these specific properties in fiber resilience during processing. First-year spinning trials were performed to support these associations, and data analysis was commenced to understand the genetic impact on fiber processing.
- ▶ DNA extraction was completed and sent to a biotechnology institute for full genomic sequencing.
- ▶ The new fiber mounting medium for updated cross-section methodology was tested to improve fiber cross-section techniques. A field trial was conducted and is fully harvested to start processing these cross-sections for advancing genomics efforts with fiber diameter at a microscopic level.
- ▶ Image analysis work for the new fiber mounting medium is ongoing with a new federal grant to support automation into this methodology. A boll-sampling protocol is being evaluated for sampling with this method to account for variability and efficient testing using microscopic tools. This enhancement is expected to support genomics work by providing the most accurate and reliable measurement of biological fiber fineness on a large-scale trial.
- ▶ Ongoing evaluations are continuing to preserve fiber quality at the gin utilizing table-top gins for comparison against full-scale gins on fiber breakage, and measurement is ongoing. Primary data was presented at the Beltwide Cotton Conference in January 2024.

Program Activity: Mitigate contamination issues.

#### Current Status

- ▶ The data from the most recent survey of global mills for contamination concerns has been received, and a research agreement to analyze the data has been established.
- ▶ Significant progress has commenced refining the color camera system, which is currently being tested across the cotton belt in five gins. The hand intrusion detection with artificial intelligence analytics has been updated, and the design for the final Visual Inspection Single-Node (VISN) system has been transitioned into the implementation phase.
- ▶ As part of the updates of VISN, researchers replaced expensive computer workstations with an NVIDIA Orin-nx (high-end graphic chip) platform to reduce costs significantly.

- ▶ Data is being gathered from the gins with the VISN installed and analyzed to track the levels of plastic seen by the detection system versus classing calls on the bales from the gins.
- ▶ Work on ultrasonic sensors to detect plastic with better accuracy and sensitivity continues. A sophisticated software system was enhanced to improve accuracy and sensitivity in detecting plastic embedded in seed cotton.
- ▶ Efforts to improve the ability of existing ginning equipment to remove plastic at the precleaning stage have continued with the employment of a 3D scanner to obtain area and volume measurements.
- ▶ Staff continues to provide technical support to NCC for contamination and other quality issues by participating in the Quality Task Force and the Joint Cotton Industry Bale Packaging Committee meetings.

Program Activity: Develop breeder calibration testing materials.

Current Status

- ▶ The effort to develop reference cotton for maturity and fineness is ongoing, with testing to assign reference values to the acquired bales. Work on bale number eight commenced while simultaneously working on the data for the seventh bale. Cross-sections were on hold until recently to update a monitor on the equipment being utilized.

Program Activity: Improve breeder sample protocols and testing.

Current Status

- ▶ Primary analysis was completed on the impact of certain types of trash on HVI® measurements. Samples are being prepared for the second phase of this study.
- ▶ The fineness and maturity bale samples were created to test for Advanced Fiber Information System (AFIS®) measurement stability for these specific fiber properties. These samples have been delivered to the Product Evaluation Laboratory at Cotton Incorporated.
- ▶ The new length uniformity measurements were implemented at the Product Evaluation Laboratory at Cotton Incorporated. The calibration protocol for these measurements is taking place at both laboratories in the U.S.

Program Activity: Develop a database of U.S. crop quality (beyond what is measured by HVI®).

Current Status

- ▶ The ongoing initiative to build a large U.S. cotton bale database continued this year with 2,730 samples received for testing from the USDA-AMS classing office. All 2,730 samples were tested with HVI® machine; thus far, 880 samples have also been tested with the AFIS® machine.

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## Strategic Objective 2: Provide accurate test data to support research and marketing efforts

### Tactic: Product Evaluation Laboratory

Program Activity: Maintain a world-class testing facility with highly trained staff.

#### Current Status

- ▶ For proficiencies testing, the following routine HVI studies were completed on the two HVI® machines: six rounds of monthly check level cotton tests, two Commercial Standardization of Instrument Testing of Cotton (CSITC) round robins, and one Bremen Institute round robin. After successfully completing the benchmark tests, the lab also ran 220 sets on both HVI® machines for nine sample sets supporting the USDA-AMS calibration cotton standards. Two AATCC and two ASTM proficiency studies were completed for fabric testing.
- ▶ Staff attended AATCC and ASTM meetings to maintain their expertise and to support standards efforts to aid cotton.
- ▶ The Air Permeability Tester planned for purchase under 2024 program funds (not capital equipment), has been ordered and is expected to be delivered in early July.
- ▶ All routine preventative maintenance service visits planned for the first half of 2024 were completed.

Program Activity: Provide accurate and reliable data to support Product Development and Implementation efforts.

#### Current Status

- ▶ At the time of this report, the lab completed testing of 1,245 fabric samples involving 3,311 tests on these samples and testing on 194 yarn packages supporting Product Development and Implementation.
- ▶ The lab provided routine fabric testing on the following Cotton Incorporated technologies in support of implementation efforts: TOUGH COTTON™, STORM COTTON™, PUREPRESS™, WICKING WINDOWS™, TransDRY™, Sweat Hiding (sole technologies or combination of technologies), NATURAL STRETCH™, RESTech COTTON™ technology, StaySOFT, and FABRICAST™ technology.
- ▶ Routine yarn testing was done for Fiber Processing as follows: spinning system comparisons, machine adjustment testing, evaluation of yarn quality using with and without pin spacer, quality control checks of compact spinning frame, and some Technical Service projects, including Product Development flat knit support.
- ▶ To support research efforts the following projects underwent appropriate testing: multiple comparison studies of denim available in the market, cotton/kapok comparisons, multiple bed sheets comparison studies for RESTech COTTON™ technology (synthetic versus cotton), abrasion resistance of knits using a new catalyst, PUREPRESS™ foam trials,

abrasion resistance of StaySOFT, mechanical properties of nonwoven bale bag, barré, stretch and recovery, tensile strength/whiteness/yellowness trials after ultraviolet (UV) exposure, effect of laundering on UV transmittance, impact of UV blocking agents and dyes on Ultraviolet Protection Factor (UPF) on various fabric constructions and colorfastness of natural dyes.

Program Activity: Support Agricultural and Environmental Research strategic efforts through fiber testing.

#### Current Status

- ▶ At the time of this report, fiber testing was completed on 18,573 samples supporting Agriculture and Environmental Research and Fiber Processing efforts.
- ▶ Fiber elongation calibration work was continued with testing on both HVI® for machine precision and calibration tolerance settings. The reliability of the data over time has allowed the staff to reduce the testing frequency from daily to once a week.
- ▶ Fiber testing on both HVI® has been underway to stabilize the new length measurements developed recently with our Quality Research group and the Fiber and Biopolymer Research Institute (FBRI) at Texas Tech University towards the long-term goal of improving length uniformity.
- ▶ Fiber testing for Agricultural and Environmental Research supported efforts on oil and protein testing sequence, evaluation and improvement of crop simulation models to meet the data needs of modern cotton production systems, breeding for improved yield and fiber quality, host plant resistance, developing a haplotype breeding system, early seed quality, demographics of *Amaranthus Palmeri* in annual and perennial crops, seed oil trials, field evaluation of potentially resistant/tolerant cotton lines against whitefly-vectored viruses in the genus *Begomovirus*, revealing the mechanisms of effective use of water in cotton, refining nitrogen recommendation for cotton production, bridging genomics and plant breeding with the cotton NAM population, new gene combinations for improvement, evaluation of the impact of variety, defoliation timing and lint cleaning on fiber quality, evaluating agronomic performance of nematode-resistant and/or FOV-resistant cotton germplasm, genomic selection for predicting fiber quality and yield in Upland cotton, development of a disease and yield loss model for Target Spot of cotton, improving oil content for Upland cotton growers, enhancing cotton fiber seed production by developing new cotton genetic populations, evaluating new alleles conferring improved fiber quality, irrigation induced modification of cotton within-boll yield components, applying proximal sensing to enhanced Upland cotton yield trials and fiber fineness and tenacity.

#### **Tactic: Capital Equipment**

Program Activity: Maintain a state-of-the-art laboratory with the necessary equipment to support all program activities.

#### Current Status

- ▶ No capital equipment was planned under the 2024 budget.

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## Strategic Objective 3: Develop and maintain software tools to buy, sell, move, and use cotton with improved efficiency and profitability

### Tactic: Software Development & Maintenance

Program Activity: Add crop updates to EFS®-USCROP™ software.

#### Current Status

- ▶ Fixed a bale history export issue. The version is now 9.4.0.
- ▶ Further updates to this activity will commence ahead of the start of the 2024/2025 crop season.

Program Activity: Continue the maintenance phase of the software development cycle for all EFS System software products.

#### Current Status

- ▶ General fixes, customer requests, and report upgrades were delivered for six programs as needed. Changes included a new Pick by Category graphic report to show multiple HVI® property actual versus predicted values before completing the mix request.
- ▶ Staff created a 64-bit version of the database library to create 64-bit versions of our application programs that require large amounts of memory not attainable in a 32-bit process.
- ▶ Continued year-to-date changes in the latest MILLNet® update general release (now version 15.1.16), including conversions to the new reporting package for the Inventory Reports program, which contained the largest number of reports to be converted.
- ▶ Programming continued replacing the older reporting software embedded within the program to use a new, better-supported product. Approximately 85% of the reports have been converted.
- ▶ Completed quality assurance testing on new contract status reports and inventory reports program updates.
- ▶ In process: adding additional database support for linking lot yarn identifiers to laydowns and adding a utility to track and import/scan documents into a database linked to our shipment and laydown identifiers.

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## Strategic Objective 4: Service and market EFS® System products that promote cotton as the most efficient and profitable fiber in the marketplace

### Tactic: Software Service & Marketing

Program Activity: Service current licensees to keep their software updated and facilitate best practices for their unique environment.

#### Current Status

- ▶ Technical Service was provided to all licensees as needed.

Program Activity: Visit sites to continue building industry relationships

#### Current Status

- ▶ Technical service visits were made in Colombia, Mexico, the U.S., and Vietnam.
- ▶ Fiber Quality presentations were made during the visits to Mexico.

Program Activity: Maintain user documentation for all EFS® System software packages.

#### Current Status

- ▶ Documentation has been maintained as needed.
- ▶ Updates to the myEFS® Support Portal included information on hardware and software specifications, HVI® educational information, and a call-out to the 40<sup>th</sup> Anniversary of the EFS® System.

Program Activity: Educate and promote the use of HVI® data and EFS® System software.

#### Current Status

- ▶ An HVI® education class for a licensee from Costa Rica was hosted in Cary, NC. The team spent three days at Cotton Incorporated to learn about HVI testing before traveling to the USDA-AMS classing office in Memphis, TN.
- ▶ HVI Educational information added to the myEFS Support Portal included a new page for the slide presentation videos that provide educational information about USDA Cotton Classing, Controlled Laboratory Conditions, and the Commercial Standardization of Instrument Testing of Cotton (CSITC) program. These videos extend the usefulness of the HVI® Educational Program by making the content available to all EFS® System licensees, and they have been narrated in multiple languages.

Program Activity: Enhance marketing efforts and content.

#### Current Status

- ▶ Various content was created to celebrate EFS's 40<sup>th</sup> anniversary, including a special anniversary landing page and video highlighting key moments and achievements over the 40 years. At the time of this report, this page had received 294 visits with an average

engagement time of three minutes and six seconds. The video highlighting key moments and achievements was played 27 times.

- ▶ The myEFS® portal's homepage banner was updated to include a special message for the EFS 40<sup>th</sup> anniversary.
- ▶ Designed and installed a new graphic for the EFS® licensee yarn wall that features the special 40th-anniversary logo and the tagline "40 Years of Trust in Cotton Bale Management."
- ▶ Staff sent 116 cloth wall calendars with the 40th-anniversary logo and postcards with the EFS® team photo to current licensees.
- ▶ On February 20th, a Cotton and Coffee presentation was made to celebrate the 40th anniversary of the EFS® program. During the EFS Marketing segment, topics covered were the strategy of marketing EFS and efforts to promote the system globally, the USCrop™ program, and the new EFS® Edge™ program.
- ▶ Marketing initiatives for the EFS® Edge™ upstream branding program included creating a promotional flyer mailed to EFS licensee contacts.
- ▶ Gifts to promote the EFS® System include personalized timeline infographic posters for three licensees. Additionally, staff prepared to send special 40<sup>th</sup> gift boxes to EFS contacts with branded gifts and packaging and create artwork for an informational insert. These gift boxes are anticipated to ship later this summer.

Program Activity: Distribute crop quality and technical information in local languages to potential and existing licensees.

#### Current Status

- ▶ Fiber quality information has been shared with licensees with weekly reports throughout the classing season.
- ▶ Fiber quality presentations were made to select licensees in Mexico.

Program Activity: Research and evaluate potential MILLNet™ software licensees.

#### Current Status

- ▶ Staff participated in 25 marketing meetings covering Bangladesh, Guatemala, Mexico, Nicaragua, Pakistan, Peru, and Vietnam.
- ▶ The list of potential EFS® mills includes five candidates: one in Guatemala, one in Pakistan, one in Peru, and two in Vietnam.

Program Activity: Provide information on U.S. cotton quality.

Current Status

- ▶ Fiber quality information has been maintained and updated throughout the classing season. Final versions will be issued when the final data for the 2023-2024 crop is released.

**Tactic: Information Technology Support**

Program Activity: Information technology services.

Current Status

- ▶ Support is being provided as needed.



## **Product Development and Implementation**

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**Strategic Objective 1: Concentrate efforts on market categories where cotton fiber share is most impactful, while incorporating best practices for reduced inputs throughout the flow of production. Identify and research sustainable innovations in technology and product development that can recover, grow, and preserve cotton market share.**

### **Tactic: Research and Development.**

Program Activity: Fiber, yarn, and fabric research.

#### Current Status

- ▶ Fiber Processing provided support for Product Development's (PD's) flat-knit research. Two yarns were developed in the Fiber Processing Lab (FPL), Ne 20/5 ring spun, combed cotton (160 pounds) and Ne 20/2 Open end spun, carded cotton (30 pounds).
- ▶ Fiber Processing provided support for PD's wovens team to perform various fabric developments. One project produced 150 pounds of Ne 20/2, double and twist yarns. Half was wound onto dye tubes to facilitate additional color development. Another project produced 48 pounds of Ne 40/1 combed, compact, ring spun cotton for jacquard warp yarns.
- ▶ Fiber Processing began a comprehensive spinning system evaluation and division-wide collaboration to provide brands with economical, sustainable, cotton yarn and fabric developments to help provide an Upland Cotton roadmap for account managers and brand representatives.
- ▶ This comprehensive comparison study will incorporate yarns spun from four spinning systems (ring, compact ring, rotor, and vortex spinning systems), knit and woven fabric designs, and dyed and finished fabrics. Yarn manufacturing was in process during the second quarter.
- ▶ Research on non-cotton denims and other manmade cellulosic constructions was conducted to evaluate competitive fiber advantages/disadvantages as compared to cotton.
- ▶ Product Development produced cotton-rich shapewear with cotton, nylon, and spandex in circular knit double-face constructions. For lighter weights, an outside mill partner was engaged to advance the project.
- ▶ Analyzed physical performance on recycled cotton fiber in denim and other constructions.

Program Activity: New yarn, fabric, product developments, technologies, and innovations.

#### Current Status

- ▶ Fiber Processing provided support for PD, TSI, and TCR team members for new brand developments. A few examples of this support included four projects to support non-

fluorine TransDRY® technology developments and two projects in support of TOUGH COTTON™ technology development.

- ▶ Sustainability focused fabric collections featured low impact processes including non-fluorine technology on denim, naturally derived mineral pigments, ozone garment technology, and synthetic fleece alternatives.
- ▶ Performance focused fabric collections included ultraviolet (UV) outdoor protection, durable twill non-denim bottom weights, water resistant insulative circular and flat knit fabrics, lightweight multi-color flat woven fabrics for apparel and home, and textural outdoor apparel knit fabrics.
- ▶ Inspirational fashion fabrics encompassed textural dobby weaves in natural colors, winter cotton chunky-sweater knit fabrics, luxury blend flat-knit fabrics, boucle' yarns, space dyed novelty-thermal knit fabrics, and continuous line embroidery on denim.
- ▶ Research and development (R&D) product adoptions by major brands included a jacquard terry, knit adoptions, and a chiseled velvet adoption, plus numerous mill commercializations.
- ▶ A UV Blocking study was organized to compare UV resistance of different fabric constructions, dye colors, and UV blocking agent applications. All fabrics were washed and tested through 50 home launderings. Technology at 20 home launderings were greater than or equal to an ultraviolet protection factor (UPF) value at zero home launderings. This was likely due to shrinkage. There was no decrease in performance between 20 and 50 home launderings. All fabrics were exposed to 100 Hours of light exposure, in a Xenon Weather-O-Meter, following 40 home launderings. The UV absorber product was durable to light exposure. A 100% cotton jersey fabric was tested wet, at zero home launderings. Wet fabric had less UV blocking capability as compared to dry fabric, but the UV absorber provided a significant boost to performance under wet conditions.
- ▶ A project was developed to explore the feasibility of a natural finish concept for cotton fabric. During the second quarter, a large DFAL trial was carried out utilizing an experimental formaldehyde free durable press finish. The experimental finish was applied on eight different woven fabrics from different mills. Variable smoothness results were recorded across the different fabrics, ranging from poor to acceptable. The results have been thoroughly analyzed but fail to yield an understanding of the disparity in the performance. More work is to follow.
- ▶ A durable thermal regulation finish for cotton was developed to maintain hand properties while imparting thermal properties. The phase change material (PCM) was acquired for application from two companies. Initial trials revealed padded application of the first PCM finish left streak marks on the fabric surface and results were brought to the chemical vendor's attention. The second PCM was screen printed at different concentrations, in combination with three different non-fluorine chemistries, to determine which one works best with the PCM. Based on the moisture management testing (MMT) data for the

WICKING WINDOWS™ technology application after one wash, all three non-fluorine chemistries performed well with the PCM. The laundering of the printed fabrics was ongoing during the second quarter. When completed, the fabrics will be tested for durability using Differential Scanning Calorimetry (DSC).

Program Activity: Evaluate manufacturing processes to reduce the impact on the environment (i.e., reduce water, energy, chemistry, and process waste) while maintaining or improving economic advantages.

#### Current Status

- ▶ An R&D project took place with an outside nonwovens partner developing 100% recycled cotton-fiber nonwoven batting for alternatives to polyester fiber fill.
- ▶ A PUREPRESS™ finish optimization project for knits is aimed to determine the best overall parameters for applying recently developed non-formaldehyde resin technology to cotton knit fabrics. In addition to durable press performance, wicking and drying time performance were examined. TCR worked with Global Supply Chain Marketing (GSCM) to update the corresponding brochure and marketing presentation to include knit fabrics. There are efforts to determine if the abrasion resistance of cotton knits treated with PUREPRESS™ technology can be boosted. Knit fabrics were obtained from a Thai mill that is interested in implementing this technology. Lab scale trials were successfully conducted, and an international virtual meeting was held with the mill to review the results. The mill received instructions for and conducted commercial trials. Trial samples were received, evaluated, and have met the criteria for PUREPRESS™ technology.
- ▶ TOUGH COTTON™ exhaust garment application research was developed to investigate the feasibility of laser etching denim fabrics, either before or after application of TOUGH COTTON™ technology, and to explore TOUGH COTTON™ garment exhaust application on denim and other woven garments. Denim pant legs (10.5 oz/yd<sup>2</sup>) with the TOUGH COTTON™ exhaust treatment, for the FABRICAST™ collection earlier this year, were remade for simulated knee abrasion demos. The simulated knee abrasion demos have been provided to GSCM to supplement marketing efforts of the TOUGH COTTON™ exhaust treatments.
- ▶ TOUGH COTTON™ technology has been gaining momentum for Cotton Incorporated. There has been keen market interest in using TOUGH COTTON™ technology on yarn. The treated yarns could be strategically knitted or woven into areas of the fabric that encounter the most abrasion during wear. To evaluate this, a series of TOUGH COTTON™ yarn application trials have been initiated. These trials include low cure as well as non-oxime polybenzimidazole (PBI) crosslinking agents. Bio-based polyethylene and crosslinkers are also being sought for TOUGH COTTON™ yarn technology.
- ▶ Lab and production trials were run to evaluate new non-fluorine STORM COTTON™ technology formulations designed to improve performance and durability.
- ▶ Foam application technology is being researched to investigate whether this technology can be a sustainable option for applying dyes and finishes to cotton fabrics. Investigation

shows improved economics for cotton wet processing and a reduced environmental footprint for cotton fabrics. In addition, during research, the Gaston Systems foam applicator has been used to successfully apply PUREPRESS™ technology to two types of cotton shirting fabrics.

Program Activity: Pursue new markets for cotton applications.

#### Current Status

- ▶ The GSCM and PDI divisions jointly launched the implementation of FABRICAST™ system for nonwoven materials.
- ▶ The TSI, TCR, and GSCM teams worked closely on the release of two new technologies, PUREPRESS® technology for knit fabrics and Non-fluorine Sweat Hiding technology for knit fabrics.

Program Activity: Assess cotton products and identify challenges and opportunities in sustainability and circularity.

#### Current Status

- ▶ Fiber Processing procured recycled denim fiber from a new supplier for evaluation. During the second quarter, the project was queued up to provide the PD team with cotton/recycled denim yarns for knitting trials and a fabric wash evaluation.
- ▶ Collaboration between FP and recycled fiber suppliers continues. The goal of this collaboration is to determine the ability for recycled cotton fiber suppliers to produce better fiber qualities than in the past.
- ▶ New needle-punched recycled cotton battings were produced for use in new fabric developments through a collaboration between FP and PD teams.
- ▶ Fiber Processing met with a key spunlacing equipment manufacturer capable of producing commercially acceptable hydroentangled substrates with recycled cotton content.
- ▶ The purpose of Cotton to Sugar research is to develop a process that allows cotton-based textiles to be enzymatically digested into sugar for the potential to further obtain ethanol or other value-added products. During the second quarter, multiple lab trials were conducted at a chemical plant collaborator. These trials involve the use of stirred reactors. Until recently, it was quite challenging to obtain meaningful hydrolysis conversion. Understanding the dynamics and implementation of a stirred reactor, as compared to a free fall type reactor, has required extensive experimentation. Much effort has gone into understanding the effect of stirring, heating, and temperature control for the hydrolysis in a stirred reactor. A consultant, with vast experience in glucose derivation from starch, was hired to assist scaling the process up with the chemical collaborator. A heating and temperature control issue which was effectively denaturing the enzyme in most lab trials was successfully found. As a result, the most successful lab trial to date at the chemical plant was completed during the second quarter. Additionally, during the

second quarter, TCR evaluated a novel hydrolysis treatment methodology in conjunction with Cotton Incorporated's already patented hydrolysis method which relies solely on a free fall type reactor. Multiple avenues for garment reduction to scale up production are also being pursued by TCR.

Program Activity: Reduce contamination in ginned cotton, yarn, and fabrics.

#### Current Status

- ▶ Commercial ginning trials were performed to evaluate various module wrap materials in association with USDA researchers and industry partners with the goal to mitigate future issues around contamination. Resulting bales are in process of evaluation through exclusive contamination detection technology located at Cotton Incorporated's Fiber Processing lab.
- ▶ Fiber Processing initiated contamination spinning trials to better understand behavior and/or tendency for various foreign materials to come out or stay in during fiber processing and spinning in a textile mill. To aid in this comprehensive evaluation, PD knit fabrics while the DFAL performed wet processing.

Program Activity: Active internal task force participation to address traceability.

#### Current Status

- ▶ An agreement was finalized between U.S. Customs Border Protection (CBP) and Cotton Incorporated. Fiber samples were received from three growing locations. There are 80 samples associated with each location. Initial trials were conducted with the goal of removing excess trash from the fiber samples and to conduct wet processing of fiber using laboratory scale dyeing machines. A contract employee was hired to conduct work on this project. A series of experiments were conducted to establish procedures for effectively scouring, bleaching, finishing, and drying loose fiber samples. A barcode system was developed for labeling and tracking samples between organizations.
- ▶ Monthly meetings between representatives of CBP, FC, and PDI are ongoing to review project status and hear from each entity.

### **Tactic: Outside Research.**

Program Activity: Develop cooperative research agreements with outside companies and organizations.

#### Current Status

- ▶ Fiber Processing is managing a year-long, outside research project focused on testing various blend levels of cotton and polylactic acid (PLA) fibers in nonwoven substrates. These substrates are being evaluated for a variety of performance characteristics including mechanical strength, filtration performance, and other relevant metrics. This information will allow a better understanding of the opportunities for cotton to enter the nonwovens market alongside another popular fiber that exhibits favorable end-of-life performance.

- ▶ The purpose of Non-Isocyanate Polyurethane using cottonseed oil and carbon dioxide (CO<sub>2</sub>) as feedstocks research is to develop eco-friendly, bio-renewable, non-isocyanate polyurethane materials, using cottonseed oil as the starting material, and carbon dioxide (CO<sub>2</sub>) as co-monomers. The goal is to meet and replace the need for petrochemical-based polyurethane in the textile sector and beyond, and increase the demand for, and profitability of all cotton plant products. The proposed study can be divided into three tasks corresponding to the three reactions, and with respective goals of (1) synthesis of epoxidized cottonseed oil, (2) synthesis of carbonated cottonseed oil, (3) synthesis of non-isocyanate polyurethane materials with various physical forms. Note, the first step uses an enzymatic conversion process to synthesize the epoxidized cottonseed oil; the enzyme can be recovered and reused. Trials year to date, have been encouraging with a high conversion rate between 86% and 93% epoxidized cottonseed oil.
- ▶ The overarching goal of the “Chemical Platform Based on Cottonseed Oil to Develop Functional Finishes for Cotton Apparel” project is to develop a chemical platform based on cottonseed oil to produce functional finishes for cotton apparel. Previously, with regards to developing an amine softener, it was reported that successful aminolysis of the epoxide ring occurred. While it is still believed this is true, the reaction system is more complex than originally believed. When replicates and further review were performed, it was apparent that the side reaction (amidation) had occurred. Additionally, preliminary testing in the Finishing lab indicated that ESCO (Epoxidized Cottonseed Oil) emulsion products deposit onto fabric but wash away if the substrate is not pretreated to activate the cellulose to encourage crosslinking reactions. During the second quarter, Soxhlet extractions were being performed to quantify the amount of oil left on the fabrics after treatment with ESCO, and to determine if crosslinking via the epoxide ring opening occurred. Softness and wrinkle resistance tests will be the next steps in determining the effectiveness of the treatment. It should be noted that this project will be ending during the third quarter due to the National Institute of Food and Agriculture (NIFA) grant funding for this project.
- ▶ Determining if a natural biopolymer can be derived from glucose produced with the Cotton to Sugar process is the scope of the “Synthesis & Characterization of a Biodegradable Bioplastic Manufactured from Cotton-Derived Glucose” project. During the second quarter, one liter of cotton glucose hydrolysate was prepared and shipped to Thomas Jefferson University for their project. The researchers have measured the exact glucose concentration and have started incubating cells using the supplied cotton-based glucose. Initially, the supplied hydrolysate was filtered to hopefully remove the denatured enzymes. Next, three samples were dried to determine the correct percentage weight concentration. This batch had an 8.5% concentration, which is higher than what was previously worked with, so the private investigating team adjusted their measurements accordingly. Incubation has begun and it is expected to obtain the first yield within the third quarter. The first cell growth samples are also expected in the third quarter at the shake-flask level. Once polymer synthesis is confirmed at that level, the project will start scaling to the two-liter bioreactor.
- ▶ Synthesis of impact modifiers for epoxy coatings is under development. Trials were designed to determine if cottonseed oil can be broken down into component fatty acids

and synthesized into impact modifiers for epoxy coatings. The principal investigator's team has successfully broken cottonseed oil into its individual fatty acids. A process was developed which converts cottonseed oil to free fatty acids with high yield and purity for the development of impact modifiers. This was accomplished through a three-step process. The first step was saponification with potassium hydroxide. The second step was subsequent acidulation with sulfuric acid. And the third step was purification by dissolution in hexane and water washes, followed by separation and distillation to remove water and hexane.

- ▶ The protein films from cottonseed meal for value additions to the cotton industry study was developed to enhance the wet stability and toughness of protein films developed from cottonseed meals by incorporating a crosslinker. A cross linker made of cellobiose aldehyde was added to the cottonseed protein film to improve its mechanical properties and water stability. The cellobiose aldehydes were successfully blended via oxidation. The process fine-tuned the oxidation conditions to reduce the hydrolysis of cellobiose in the blend. The pH of the aldehydes was optimized to increase the concentration of aldehydes as the crosslinker.
- ▶ The goal of the "Cottonseed Oil Composites" study is two-fold. The first step is to develop composites made from cottonseed oil and poly lactic acid (PLA) and the second step is to understand how cottonseed oil improves the properties of PLA. Preliminary experiments to optimize the compound molding conditions were completed. The effect of melting/blending time on the strength of the PLA-cottonseed bio-composite was evaluated. The molding protocol was optimized by re-setting the press pressure and temperature parameters which greatly improved the mechanical strength and the homogeneity of the composite products.
- ▶ Cotton Gin Trash (CGT) Cottonseed Meal (CSM) Bio-composite Particleboard research was developed to use CSM as a bonding agent to glue CGT to form two-component composite particleboards. The facility was set up to help with making the particle board and testing. Discussed their capabilities on service/collaboration to make the stereotype of CGT/CSM (protein) bio-composites.
- ▶ To understand the wettability of jet-milled particles and the influence of the particle characteristics on the stability of oil-in water emulsions the "Cotton Particles from Waste Cotton as Pickering Emulsifier-Creating Cotton Cellulose Gel and Cotton Foam" project was initiated. This project will provide a detailed characterization of emulsions and began in May. The initial meeting to discuss the project plan with the principal investigator has been completed.
- ▶ A project is advancing to develop biobased products from low maturity cotton and cotton wastes. Cotton linters were dissolved in N-methyl morpholine N-oxide (NMMO) under different conditions and the conversion of the resulting solution into films through regeneration and hot-pressing were studied. As a continuation, varying percentages of linter powder (one percent, two percent, and three percent) were dissolved in NMMO (75 wt%). Both a hotplate and an oven heating system were investigated in addition to freeze drying as a method of drying cellulose films to compare with heat pressing were explored.

Dissolution of linter powder in NMMO/water solvent systems resulted in a transparent solution state that suggested successful dissolution of linter powders. Upon drying, the hydrogel based on one wt% and three wt% linter solution exhibited visible cracks on the surface while the two wt% exhibited a smooth surface.

Program Activity: Scout technologies being offered by outside companies.

#### Current Status

- ▶ The FP team visited a global supplier of recycled fiber machinery in France and their pilot lines for possible future developments and trials.
- ▶ The goal of a “Spray Application Technology” study is to investigate spray technology as a sustainable option for applying dyes and finishes to cotton fabrics, that could also improve economics for cotton wet processing and reduce the environmental footprint. Spray trials were successfully conducted with TOUGH COTTON™ and STORM COTTON™ technologies on a WEKO spray unit rented in late 2023 and installed at Cotton Incorporated. Baldwin Technology has a full width spray unit at North Carolina State University (NCSU). Cotton fabrics and starting recipes have been sent to Baldwin's lab facility in Sweden for processing verification. Once this is complete, trials will be performed at NCSU with Baldwin's assistance.
- ▶ An evaluation of biobased odor control finishes on cotton substrates was conducted to formulate, apply, and evaluate the performance of bio-based odor control finishes on cotton. A 100% bio-based antibacterial and anti-odor product was padded on woven and knit fabrics for the evaluation. Overall, three different versions of this product were evaluated. The initial version performed well functionally, killing gram-positive bacteria while not generating any detectable ammonia (odor). The control sample became saturated with ammonia very quickly. Though this product performed well it was determined that the pH of the product was low enough to have an impact on the whiteness index and tensile strength of the treated fabric over time. Two other versions of this product at higher pH were evaluated. One of the products evaluated performed functionally and physically beyond expectation. The treatment not only retained the whiteness index on different fabric constructions, but also increased the tear strength of the treated fabrics when compared against the control. The samples have been submitted for testing anti-odor performance after 20 home launderings.
- ▶ In April 2024, exploratory trials were conducted at Asutex's facility located in Barcelona, Spain. Four trials were conducted utilizing Asutex's Mo(i)st system on various woven and knit fabrics supplied by Cotton Incorporated. Asutex's Mo(i)st system works at extremely low liquor ratios and is based on the natural absorbency of the cotton fabric. Dyeing occurs between the "leaking point" or saturation, and the natural wet pick up of the fabric, which based on the fabric construction, can vary between 1:2 and 1:3 liquor ratios. This system can work on any existing garment dye machinery, and dyeing is done at room temperature.
- ▶ Multiple ECOFinish® and CLOSE-N trials were conducted in April at the Care Applications® facility located in Alcoy, Spain. Cotton Incorporated supplied fabrics for



several trials, finished with Care Applications' ECOFinish system, which is a dosing (or nebulizing) system that applies dyes and chemicals at very low liquor ratios, as low as 1:1 L/R. Additional trials were conducted using Care Applications' CLOSE-N system, which is a nitrogen infused closed system for facilitating dyeing in an oxygen free environment and is conducive for dyeing cotton with sulfur and vat dyes under reduction.

### **Tactic: Laboratory Operations.**

Program Activity: Maintain state-of-the art facilities with highly qualified staff.

#### Current Status

- ▶ The Research Labs were maintained effectively by PDI to strategically support research and development for the Company.
- ▶ Meetings with various equipment and machine manufacturers were held to evaluate current and new technologies.
- ▶ The Analytical laboratory completed 37 projects through the end of the second quarter, with 27 projects related to research and ten projects related to technical services and implementation.
- ▶ The Analytical laboratory evaluated 356 samples through the end of the second quarter, with 269 samples related to research and 87 samples related to technical services and implementation.
- ▶ The Dyeing and Finishing Applications Laboratory (DFAL) completed 53 projects by the end of the second quarter.
- ▶ The DFAL has processed 82 rolls of knit and woven fabric, equaling 3,730 yards or 2,021 pounds of fabric, as well as 166 yarn packages, equaling 332 pounds.
- ▶ The Garment Processing and Print Laboratory (GPPL) completed 21 projects which included processing 1091 fabric pieces and 5 garments.
- ▶ The DFAL investigated drying equipment manufacturers to replace the Galvanin Package Yarn Dryer. A GHIBLI Dryer, AR 11.10 was selected and purchased. The new dryer is expected to arrive in a U.S. port mid-late November.

Program Activity: Expenses for laboratory supplies, dyes, chemicals, etc.

#### Current Status

- ▶ Laboratory supply inventory levels remained current with products used in the Research Center.

Program Activity: Execute environmental and safety programs.

#### Current Status

- ▶ Vendor safety contracts were updated.

- ▶ Six safety programs have been undertaken year to date.
- ▶ One chemical disposal was undertaken in June.
- ▶ Monthly effluent monitoring and semiannual flow meter calibrations and water analysis were completed according to compliance requirements.

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## **Strategic Objective 2: Optimize and implement products and technologies to advance cotton in global markets.**

### **Tactic: Technical Services and Implementation.**

Program Activity: Mill implementation.

#### Current Status

- ▶ Supported domestic and international mills on the application of various Cotton Incorporated technologies.
- ▶ Worked with mills in the U.S., Asia, and Central America providing technical service support on cotton wet processing.
- ▶ Activity related to TransDRY® technology has continued to center around an adoption by a large U.S. apparel brand that began in early 2023. Production for this one adoption has continued to run out of South America through one mill. However, two additional mills have now been on-boarded to help support expansion of the adoption. Additional interest in the technology has increased through supply chains in Asia, with several U.S. brands running production trials on the technology. In the U.S., a mill has run over 2,000 pounds of production to support a new program from a Canadian brand selling products in Canada and the U.S. An additional TransDRY® technology program on socks, that has been running for years in South America, continues to run with the U.S. brand increasing production orders during the first half of 2024.
- ▶ Production of the PUREPRESS™ technology in Asia and South America continues to run in support of two U.S. brands. Programs for men's and women's shirting, as well as children's bottom weight fabrics, are being run in China and South Asia, while a program in South America continues to supply men's golf pants. Additionally, with the release of PUREPRESS™ technology on knit fabrics, two mills in South Asia and China have run production trials and have been qualified suppliers of the technology.
- ▶ Implementation of STORM COTTON™ technology has been driven mainly by three large U.S. retailers with production for domestic markets in Asia. The largest program continues to be by an American brand running production in the U.S. on heavyweight sweatshirt hoodies.

Program Activity: Brand and retailer technical support.

Current Status

- ▶ Worked with brands and retailers in the U.S., Asia, and Central America providing technical service support on cotton wet processing.
- ▶ The TOUGH COTTON™ technology continues to generate the most interest in terms of production trials, testing, and new inquiries. Large U.S. brand programs continued to run and expand in the first half of 2024. One major U.S. retailer has expanded production from Southeast Asia to additional mills in Central America, to increase production to meet increasing orders. To date, the number of samples that have been submitted for testing is the most ever received in the first half of any year. Testing on yarns and fabrics treated with TOUGH COTTON™ technology without resin have accounted for over 75% of all testing submissions.

Program Activity: Technical services.

Current Status

- ▶ Product Development and Implementation team members provided technical service support as needed to solve processing quality issues on behalf of mills and manufacturers worldwide.
- ▶ The Technical Service team processed and interpreted the data on 642 samples of fabric treated with Cotton Incorporated technologies. TOUGH COTTON™ technology was most popular while TransDRY® technology was experiencing the most renewed interest. RESTech COTTON™ technology was recently launched and several trials were conducted in both the U.S. and Asia evaluating this finish.

Program Activity: Provide technical support and instruction through in-house and outside services aimed at improving cotton's performance and processes.

Current Status

- ▶ Fiber Processing staff provided specific yarn technical service support for U.S. and global spinning mills.
- ▶ Product Development supported other divisions of the company through knitting, fabric, and yarn procurement, and providing fabric development information for social media posts, and technical services.
- ▶ Team members provided an educational program on denim to a U.S. brand.
- ▶ Conducted internal research on the application of non-fluorine durable water repellents onto yarn. First, products were evaluated from different suppliers. Next, procedure modifications on the levelness of the application throughout a yarn package were evaluated. Afterwards, a curing study on TOUGH COTTON™ technology applied to yarn was performed. Eight different variations were studied while closely monitoring the cure process with instrumentation.

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**Strategic Objective 3: Participate in and support cotton marketing activities/influence industry decisions through technical avenues such as standardization and education.**

**Tactic: Product Integrity, Standards & Industry Connectivity.**

Program Activity: Participate in/sponsor/support key industry technical activities.

Current Status

- ▶ Staff attended the 2024 Beltwide Cotton Conference in Ft. Worth, Texas. Individual meetings were held with key stakeholders to discuss new fiber varieties and contamination mitigation.
- ▶ Provided instruction at two of the 2024 Cotton Ginners Schools – Lubbock Ginning School in March and the Las Cruces Ginning School in May. Fiber Processing teachers presented future ginning managers with a spinner’s perspective in textile processing, cotton fiber quality, and contamination mitigation.
- ▶ Serving on the 2024 INDA RISE Conference Committee. The 2024 conference is to be held in Raleigh, NC from October 1-2, 2024.
- ▶ Participating with GSCM Nonwovens Marketing team to provide triannual activity updates to key cotton stakeholders.
- ▶ During a two-week trip to Asia, staff delivered presentations to fabric and apparel manufacturers supplying the top 100 brands in the U.S.
- ▶ Staff sponsored, attended, and/or engaged with the industry through the various conferences and university involvement such as the following:
  - SEAMS Conference, Myrtle Beach, SC
  - Southern Textile Research Conference, Myrtle Beach, SC
  - AAFA Environmental Committee Meeting, Long Beach, CA
  - AAFA Traceability and Sustainability Conference, Long Beach, CA
  - NCSU Wilson College of Textiles Open House, Raleigh, NC
  - AATCC Committee meetings, Raleigh-Durham, NC
  - Agilent Atomic Spectroscopy Seminar, Raleigh, NC

Program Activity: Enhance relationships with industry leaders in retail, manufacturing, and support segments through educational outreach and technical organizations.

Current Status

- ▶ The Southern Textile Association (STA) Northern Division Spring meeting held in Raleigh, NC, was attended by staff. This technical meeting provides opportunity for Fiber Processing staff to enhance relationships with many U.S. spinners, knitters, weavers, and machinery suppliers in attendance.

- ▶ Collaborating with members of the Clothing Care Research Consortium on an ongoing cold-water wash study.
- ▶ The PDI division continued to support the AATCC through meeting participation, serving on committees and boards, and judging competitions.

Program Activity: Build and maintain partnerships with textile mills, garment manufacturers, and chemical companies.

#### Current Status

- ▶ Staff visited a textile spinning mill and nonwoven manufacturer in western North Carolina.
- ▶ Fiber Processing conducted a technical visit to the innovation hub to expand the use of recycled fibers.
- ▶ Conducted a trip to Spain, Germany, and Switzerland to visit with key technical staff at several chemical companies and a machinery manufacturer to learn of new technologies in dyeing and finishing and run trials exploring some of these technologies.
- ▶ Conducted a trip to Italy to tour and meet with a major knitting machine manufacturer.
- ▶ Hosted several chemical companies at the Research Center to learn about new technologies and share Cotton Incorporated research.
- ▶ Provided technical service support to mills and brands.
- ▶ Worked closely with global chemical companies on activities related to Cotton Incorporated technologies.

Program Activity: Participate in trade shows providing technical expertise on new cotton fabric developments.

#### Current Status

- ▶ Staff attended TechTextil/TexProcess Frankfurt 2024. This exhibition provides visitors with the latest trends in technical nonwovens and textiles. Meetings were held with machinery and fiber suppliers to explore new possibilities for cotton use in technical fabrics.
- ▶ The PDI division supported Cotton Incorporated staff during both the Kingpins New York Show in New York City, NY and the Functional Fabric Fair in Portland, OR where Cotton Incorporated technologies were exhibited.
- ▶ Staff attended the FILO International Yarns Exhibition in Milan, Italy. This trade show offers a platform to meet selected Italian and international companies to view the latest trends in yarn and fiber. A tour and meeting were held with a major, local knitting machinery supplier.

- ▶ Staff attended the semiannual Interwoven Trade Show in High Point, NC to meet with vendors and explore new developments.
- ▶ Cotton fabric information was requested by 231 different companies. The metrics collected this year from trade shows, one-on-one customer meetings, Importer Support Programs (ISP) workshops, and special events totaled 312 unique requests; with 5,111 fabric swatches and technical specification sheets being shared.

Program Activity: Participate in Importer Support Programs.

Current Status

- ▶ The PDI division provided hands-on experiential activities to ISP workshop attendees on textile equipment.
- ▶ The PDI division provided materials and instruction to the ISP Fundamentals Workshops.
- ▶ Conducted lab presentations in the Research Center to provide detailed explanations and demonstrations of textile equipment, production processes, CAD/CAM software, and various fabric constructions and finishing technologies for ISP workshop attendees.

Program Activity: Presentations on technical advances in PDI.

Current Status

- ▶ Presented on Cotton to Sugar at the Beltwide Conference.
- ▶ Presented on Converting Cotton Gin Trash into a Biodegradable Film at the Beltwide Conference.
- ▶ Presented on UPF Performance of Cotton with and without UV Absorber Finish at the STRC.

Program Activity: Support for CottonWorks™ website.

Current Status

- ▶ All fabric developments from the FABRICAST™ collections were digitized and digital twins were made available.
- ▶ Visits to the CottonWorks™ website for fabric information and 3D digital fabric files resulted in 47,902 pageviews of FABRICAST™ collection developments year to date.
- ▶ Since January 1, 2024, there have been 4,758 downloads from 758 unique email addresses of 3D fabrics from the CottonWorks™ website.
- ▶ Developed a new tour protocol and provided the first education session to ISP instructors and Cotton Incorporated staff.

- ▶ Procured new headsets and receivers for tour guides and guests to enhance the Research Center tour experience.
- ▶ Presented technical advancements during CottonWorks™ “Considerations for Flatbed Knit Design” webinar to 336 registered attendees from 129 unique organizations.
- ▶ Presented technical advancements during CottonWorks™ “Cotton Dyeing: Technologies for a Sustainable Future” webinar to 794 registered attendees from 586 unique organizations.
- ▶ Presented in the Educate the Educators program.

Program Activity: Support for Consumer Marketing.

Current Status

- ▶ Participated in a speaker panel at the *Sourcing Journal* Sustainability Summit.
- ▶ Interviewed by *Rivet* for a piece titled “Cotton’s Sweet Success” on the Cotton to Sugar technology.
- ▶ Supported the Communications team with information for articles and press releases.

**Tactic: Information Technology Support.**

Program Activity: Information technology services.

Current Status

- ▶ Support received as needed.

**Tactic: Capital Equipment.**

Program Activity: Maintain state-of-the art cotton processing laboratories.

Current Status

- ▶ The Fiber Processing Lab will receive the latest rotor spinning technology from Rieter Corporation, a top provider for commercial spinning mills worldwide.
- ▶ The Product Development Lab will receive the latest weaving loom from CCI Evergreen II Loom.

# Research and Development Committee

## Fiber Competition

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### Explanations of terms and activities

- ▶ **Engineered Fiber Selection® (EFS®) System:** EFS System is the name of the suite of software products designed to work independently and cooperatively to manage cotton as a raw material and asset. By providing tools to manage most aspects of cotton's life cycle, the EFS System seeks to improve the efficiency of cotton flow, increase the efficiency and use of cotton, boost cotton's profitability, and increase the demand for cotton. The EFS System includes MILLNet™ Software, EFS®-USCROP™ Software, and Cotton Communicator™ Software.
- ▶ **EFS-Cotton Communicator Software:** Enables cotton merchants/co-ops and mills to exchange information related to the buying and selling of cotton.
- ▶ **EFS-MILLNet Software:** Manages a mill's acquisition and use of USDA HVI® classed cotton. This software can provide traceability reports by compiling information about the bales consumed in a laydown. Integrated programs create transparency for the different departments within the mill.
- ▶ **EFS-USCROP Software:** Enables a user to review and analyze crop data using USDA HVI classing information. Recap and discount premium reporting are enhanced with a host of graphs and charts. This product is available as desktop software and via a website that can be viewed on any computer or mobile device.
- ▶ **Product Evaluation Laboratory:** This activity aims to provide accurate, reliable, and unbiased test data on fiber, yarn, fabric, and products from Cotton Incorporated's research-to-marketing efforts and breeder initiatives to increase the global demand and use of U.S. Upland cotton.
- ▶ **Software Development and Maintenance:** An activity to plan and execute the development of software products for managing and improving the efficiency of cotton as a raw material, asset, and commodity. The Product Development group services and adapts the existing software products in the product life cycle's growth and maturity stages.
- ▶ **Software Service and Marketing:** Provides Technical Service and Marketing efforts. Technical Service is high-quality customer service, accomplished by providing EFS System users with the documentation and technical service support that enables them to use the products efficiently. Frequent customer contact builds relationships with existing customers and helps gather feedback to guide product maintenance and new product development. Marketing activities are to develop a competitive advantage for cotton by defining potential markets for the EFS System and researching potential customers for current products in the EFS System family. This area communicates EFS System software and HVI data benefits to potential licensees. By maintaining a high level of customer contact, this group works with all segments of the EFS System product life cycle by providing information for maintaining established products and developing product requirements for future projects.



- ▶ **Quality Research:** This activity aims to provide better tools, measurement systems, and data analysis techniques to improve quality measurements of cotton fiber, yarn, and fabric.

## Product Development and Implementation

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- ▶ **Color Services Laboratory (CSL):** This laboratory assists various departments within the Company, and the industry, in the areas of color matching, color evaluation, off-quality analysis, and small-scale applications.
- ▶ **Dyeing and Finishing Applications Laboratory (DFAL):** This laboratory contains both production scale and lab scale equipment used for internal projects and for industry implementation trials. The machinery allows the application of dyes on textiles and mechanical and chemical finishes.
- ▶ **FABRICAST™ Collection:** This is a collection of knit and woven fabrics used to provide the industry with direction and inspiration for product development. The fabrics also strategically market cotton performance technologies.
- ▶ **Fiber Processing (FP):** A team of scientists dedicated to converting cotton fiber efficiently into yarn that will meet industry specifications, provide technical assistance, and develop innovative yarns.
- ▶ **Fiber Processing Laboratory (FPL):** This laboratory contains opening, cleaning, carding, and spinning equipment for yarn manufacturing.
- ▶ **Hand:** The tactile sensations or impressions, which arise when fabrics are touched, squeezed, rubbed, or otherwise handled.
- ▶ **Home Laundry Test Data (HLTD):** A data set developed by AATCC Committee RA88, Home Laundering Technology, established to develop a consistent set of test conditions for all test methods involving home laundering.
- ▶ **Industry Associations:** Cotton Incorporated maintains a presence and membership in several leading industry associations.
- ▶ **AATCC:** American Association of Textile Chemists and Colorists.
- ▶ **ASTM International:** consensus-based standards organization, committee D13 covers most textile standards.
- ▶ **IPC®:** The global association assisting electronics manufacturing industry to empower members to build electronics better.
- ▶ **ISP Workshops:** Technical education workshops are funded under the Importer Support Program in Cary, NC, and in regional and international locations. Cotton Incorporated technical staff members often serve as instructors for the workshops and are heavily involved in the development of workshop materials.

- ▶ **Product Development (PD):** A team of dedicated scientists and designers that provide the cotton industry with new, inspirational cotton fabrications, provide technical services, and collaborate with industry partners.
- ▶ **Product Development and Implementation (PDI):** The textile research division within Cotton Incorporated that consists of Fiber Processing, Product Development, Textile Chemistry Research, Technical Services and Implementation, and Product Integrity.
- ▶ **Product Development Laboratory (PDL):** This laboratory houses knitting and Computer Aided Design and Manufacturing equipment for producing fabric samples.
- ▶ **Research Center:** Cotton Incorporated's research center is located in Cary, NC. For the activities covered in the Research and Development Committee, annual funding for operating the research center is allocated to include expenses for machinery, chemicals, contract labor, and materials.
- ▶ **Technical Services and Implementation (TSI):** The department within PDI that is responsible for assisting global mill partners with the implementation of new technologies and maintaining quality production of those technologies, provide technical services, and support the marketing efforts of those technologies.
- ▶ **Textile Chemistry Research (TCR):** Textile Chemistry Research is comprised of a team of researchers who investigate methods of cotton wet-processing improvement, sustainable wet-processing techniques, and who evaluate new dyes, chemicals, and application methods to enhance the performance and reduce the environmental footprint of cotton.



# Global Supply Chain Marketing Committee

## Executive Summary

### Global Supply Chain Marketing

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The Global Supply Chain Marketing (GSCM) division is responsible for working with companies and organizations to promote the inclusion of cotton in products. The product segments the division works with include apparel, home textiles, and nonwovens products.

GSCM targets a strategic objective to maintain a global presence for cotton. Several key actions were undertaken in the first half of 2024 to further this objective:

- ▶ Staff attended and managed booths at the Kingpins Show in New York City, the Spring Functional Fabric Fair in Portland, Oregon, the Interwoven show in High Point, North Carolina, and the Outdoor Retailer Show in Salt Lake City.
- ▶ Staff conducted six private training and educational workshops in 2024. These on-site events were held with individual companies and involved more than 150 employees.
- ▶ U.S. marketing staff held 113 individual meetings with 90 organizations while staff in Asia conducted 126 meetings and held six group presentations in the region. Mexico City staff conducted 48 meetings and calls with 32 companies, exhibited in one textile show, hosted one fashion meeting, organized two webinars, attended five industry events, spoke at two textile shows, and spoke in two virtual conferences.

The GSCM division strategically targets the development and facilitation of product and technology ideas that further the use of cotton in products. During the first half of 2024, many actions led to significant gains for cotton including:

- ▶ A well-known shapewear company is conducting trial work to use WICKING WINDOWS™ technology on their ladies activewear products.
- ▶ A well-known European men's brand is in trial work to use WICKING WINDOWS™ technology.
- ▶ A major U.S. retailer is continuing its TOUGH COTTON™ technology program on girl's leggings.
- ▶ A well-known U.S. workwear company is continuing its STORM COTTON™ technology apparel program and is in trial work to add it to a garment along with TOUGH COTTON™ technology to promote dual technology features.
- ▶ A major sheeting supplier has signed a confidential disclosure agreement to begin conducting REStech COTTON™ technology trial work.
- ▶ An Australian activewear brand commercialized 20,000 units of cotton tees with TransDRY® finishing. An Australian underwear and casual wear brand adopted the TransDRY® technology on cotton underwear for the Australian markets. A total of 1,450,000 units were distributed during the first half of 2024. The same Australian brand commercialized some 500,000 pairs of cotton blended socks with TOUGH COTTON™ technology.

- ▶ A leading French apparel brand adopted TOUGH COTTON™ technology on men's, women's, and kids' 100% cotton tees for the European market and online sales for the global market. A total number of 900,000 units of cotton tees were produced.
- ▶ A Japanese fast-fashion retailer worked with a Chinese trading company and a Chinese mill to adopt TOUGH COTTON™ technology on 120,000 pieces of cotton apparel.
- ▶ Two hundred seven companies have licensed the **enhanced**™, **natural**™, and Seal of Cotton trademarks in total for Nonwovens. In 2024, seven new agreements were secured, along with 11 trademark adoptions, including four **enhanced**™, three **natural**™, and four Seal of Cotton trademarks. Countries include U.S., Poland, Korea, and Spain, and distribution includes U.S., Korea, and worldwide. Sixty-four swag boxes were distributed worldwide as a new marketing initiative in licensing.

A third strategic objective for GSCM is conducting technical education and training to support the use of cotton. In this area, notable actions included executing 20 technical education workshops and implementing 29 grants with 27 U.S. universities to further the awareness and use of cotton.



# Global Supply Chain Marketing Committee

Mid-Year 2024

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## Strategic Objective 1: Maintain a global presence for cotton

### Tactic: Participate In/Sponsor Key Industry Events and Establish Contacts with Industry Associations, Companies, and Organizations

Program Activity: Identify and contact key companies, associations, and organizations to further promote the awareness and use of cotton in products.

#### Current Status

- ▶ Staff attended and managed a booth at Kingpins Show in New York City and met with more than 25 visitors at the booth during the two-day event. Thirteen FABRICAST™ fabrics were requested.
- ▶ Staff attended and managed a booth at the Spring Functional Fabric Fair in Portland, OR and met with more than 100 visitors over two days. Two hundred twenty-six FABRICAST™ fabrics requested.
- ▶ Staff attended the Interwoven show in High Point, NC.
- ▶ Staff attended the SEAMS conference and managed a resource table.
- ▶ Staff attended and managed a booth at the Outdoor Retailer Show in Salt Lake City, UT. The show serves as a means of promoting cotton products to the outdoor apparel segment.
- ▶ Staff conducted six private educational workshops in 2024 with more than 150 attendees in total.
- ▶ U.S. marketing staff held 113 individual meetings with 90 organizations.
- ▶ Asia staff conducted a total of 126 meetings and six group presentations in the region to provide brands, retailers, sourcing companies, garment, and textile mills, etc. with updated information on cotton services and promote the use of cotton.
- ▶ A one-day event was organized in Hong Kong to create a platform for brands, retailers, and sourcing companies to network and create business opportunities with regional textile/garment mills and chemical companies. A total of 193 participants from more than 70 companies attended the event. The event included 1) presentations on the latest fashion trends, fabric developments, 3D creations, and developments; 2) twenty-one exhibitors from eight countries displaying their latest cotton products; 3) draping display of some innovative fabrics from the exhibitors; and 4) discussions about performance technologies and cotton information updates.

- ▶ Staff visited ISPO Beijing 2024 in Beijing, China. The show attracted over 500 exhibitors and around 30,000 visitors from the region.
- ▶ Staff attended Li & Fung “Digital Technology Unleashing a New Era in Fashion” Seminar in Shanghai, China. Around 60 representatives from sourcing offices, brands, retailers, and the local textile industry attended the event.
- ▶ Staff visited CHIC Shanghai, Spring Edition, in Shanghai, China. More than 130,000 visitors to the show were updated on the latest industry trends.
- ▶ Staff visited CIDPEX 24 Conference in Nanjing, China. The event was attended by more than 700 representatives from the textile industry.
- ▶ Staff visited ISPO Shanghai 2024 in Shanghai, China. The event attracted around 20,000 participants checking on the latest developments by more than 500 outdoor brands and manufacturers.
- ▶ Staff visited Shanghai Intertextile Yarn EXPO 2024 in Shanghai, China. The event attracted more than 100,000 visitors.
- ▶ Staff attended China Cotton Industry Development Summit 2024 in Xian, China. The event was attended by key leaders from the cotton trading and spinning industry.
- ▶ Staff visited Intertextile Shanghai Fabrics Apparel, Spring Edition in Shanghai, China. The event was attended by approximately 100,000 visitors, with over 3,000 exhibitors from 25 countries.
- ▶ Staff visited Kingpins China in Hangzhou, China. The event was attended by over 2,000 visitors and staff met with leading Chinese denim companies at the event.
- ▶ Staff visited China Interdye 2024 in Shanghai, China. The event was attended by approximately 17,500 visitors with more than 600 exhibitors from 16 countries. Staff were updated on some new technologies and did research on chemicals available for cotton performance technologies.
- ▶ Staff visited Saigontex 2024 in HCMC, Vietnam. The event attracted more than 30,000 visitors and more than 1,000 exhibitors from 24 countries had booths at the event.
- ▶ Staff attended IGATEX 2024 in Lahore, Pakistan. There was a total of 180 exhibitors from the textile machinery industry displaying their latest products.
- ▶ Mexico City staff conducted 48 meetings and calls with 32 companies, exhibited in one textile show, hosted one fashion meeting, organized two webinars, attended five industry events, spoke at two textile shows, and spoke in two virtual conferences.
- ▶ Puebla City hosted the largest textile and machinery show in Mexico, Exintex, where the staff participated by speaking about digital product creation and exhibited. The booth was

visited by approximately 250 executives, academic professionals, and students during the four-day show, resulting in 59 inquiries related to the promotion of the FABRICAST™ collection, the CottonWorks™ platform, and fashion marketing resources.

- ▶ Staff hosted 13 fashion designers and four communication media at the Mexico City office to launch the “STYLING COTTON: Ready-to-Wear Talent 2024” platform to promote the CottonWorks™ platform, the FABRICAST™ collection, the digital product creation, and fashion marketing tools.
- ▶ Mexico City staff organized two webinars. The first focused on fashion marketing and was attended by 275 executives from 99 companies from seven countries. The second focused on consumer activewear and athleisure purchasing behavior and fashion trends and was attended by 265 executives from 113 companies from 11 countries.
- ▶ Mexico City staff attended five industry events during the first half of 2024: Colombiatex in South America, The Mexican Textile Annual Luncheon in Mexico, Expo Production in Mexico, Heimtextile Colombia in South America, and The Apparel Sourcing Show in Central America.
- ▶ Staff spoke and participated in an in-person panel about the digital product creation tool at the Expo Production Show in Mexico City.
- ▶ Staff spoke at the Textile Growth and Trends Perspectives in Latin America, a virtual presentation organized by the Fashion Group.
- ▶ Staff spoke at the virtual Fashion News Awards where the Mexico City office was given an award in the “most innovative initiative” category as a result of the promotion of digital product creation and the STYLING COTTON platform.
- ▶ Mexico City staff has started conversations to build a long-term partnership with the leading not-for-profit textile, apparel, and fashion organization in Colombia to amplify the cotton message in South America.
- ▶ Staff in Turkey held more than 50 meetings with more than 30 companies to date.

Program Activity: Promote a global presence for cotton with specific emphasis on circularity, traceability, and sustainability.

#### Current Status

- ▶ Staff conducted an educational session focused on The Beauty of Nature: Marketing Cotton’s Natural Benefits during the Interwoven show in High Point, NC.
- ▶ Staff participated in a panel discussion focused on Fiber Evolution: Exploring Trends in Fabric Life Cycles during the Interwoven show in High Point, NC.

- ▶ Staff held a Cotton Biodegradability and End of Life educational forum on the main stage during the Functional Fabric Fair in Portland, OR.
- ▶ Staff initiated a marketing brochure for mills, brands, retailers, and sourcing companies to better understand the U.S. cotton traceability process.
- ▶ Information on cotton traceability and customs regulations was provided at a regional event organized for brands, retailers, sourcing companies, and the textile industry.
- ▶ Staff worked with regional textile mills to develop denim samples using more sustainable manufacturing processes as compared to traditional methods.
- ▶ Staff continued to source and update the supplier list for Recycled Cotton.
- ▶ Mexico City staff organized three dinner meetings with 35 mill owners, high level executives, and textile and apparel chamber officials in Mexico City, San Salvador City, and Guatemala City. Among several topics discussed, cotton sustainability and related themes such as recycling and traceability were the core of the conversations.
- ▶ Mexico City staff initiated formal conversations with a Peruvian manufacturer, with offices in the U.S., to support its efforts on consolidating a project to compost cotton.
- ▶ Mexico City staff produced two short product inspiration video capsules in Spanish to promote the fashion marketing and CottonWorks™ resources for the Latin American market.

### **Tactic: Implement a Strategic Partnership with CCI**

Program Activity: Provide support to Cotton Council International. Conduct joint program activities that are mutually beneficial.

#### Current Status

- ▶ Staff presented and attended the CCI Global Staff Meeting in Singapore. Presentations on Consumer Research and updates on Supply Chain Marketing were presented at the event and were updated on various topics and programs of COTTON USA.
- ▶ Staff virtually attended Cotton Day Japan. This hybrid event was attended by 242 participants.
- ▶ Staff attended COTTON USA Chronicles, a half-day event in Bangkok, Thailand. The event was attended by more than 150 participants from 70 companies, represented by fashion brands, retailers, spinners, textile mills, and garment manufacturers from Thailand.
- ▶ Staff attended a COTTON USA seminar “Transparent and Sustainable Sourcing” in Dhaka, Bangladesh. The event was attended by more than 200 participants from brands, spinners, textile mills, and garment manufacturers from the local textile industry.



- ▶ Staff attended and presented at a COTTON USA Leadership Forum in Murree, Pakistan. The event attracted approximately 26 owners/CEOs and 32 technical directors from manufacturers and mills from the textile industry in Pakistan.
- ▶ Mexico City staff attended the COTTON USA Sourcing Fair in Mexico.

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## **Strategic Objective 2: Develop and facilitate the adoption of product and technology ideas**

### **Tactic: Promote Strategic Initiatives for Protecting or Enhancing Cotton's Market Share**

Program Activity: Conduct activities in support of cotton use in performance wear, womenswear, denim products, home textiles, and other strategically important market segments.

#### Current Status

- ▶ An up-and-coming men's underwear company is using the Seal of Cotton trademark on all of their products.
- ▶ A size inclusive ladies mail order company is licensing the Seal of Cotton trademark across a variety of apparel products including tops, bottoms, loungewear, and intimate apparel.
- ▶ A home textile company has licensed the Seal of Cotton trademark for use on bedding.
- ▶ A baby gear company has licensed the Seal of Cotton trademark on their carrier and bassinet liners in addition to bedding.
- ▶ A well-known luggage brand is using the Seal of Cotton trademark on their tote bags, luggage sleeve, travel bag, and adult and youth hats.
- ▶ A licensing company is using the Seal of Cotton trademark for branded children's apparel that will be sold at a big-box retailer.
- ▶ A brand known for infant apparel is licensing the Seal of Cotton trademark on its baby onesies.
- ▶ A well-known shapewear company is conducting trial work to use WICKING WINDOWS™ technology on their ladies activewear products.
- ▶ A well-known European men's brand is in trial work to use WICKING WINDOWS™ technology.
- ▶ A major U.S. retailer is expanding their use of TOUGH COTTON™ technology into other product lines.
- ▶ A major U.S. retailer is continuing its TOUGH COTTON™ technology program on girl's leggings.

- ▶ A promotional apparel/uniform company is using TOUGH COTTON™ technology on their men's hoodie program.
- ▶ A well-known apparel company is continuing the use of their TOUGH COTTON™ technology program.
- ▶ A U.S. department store is continuing to use TOUGH COTTON™ technology on their children's apparel.
- ▶ A well-known U.S. workwear company is expanding the use of their TOUGH COTTON™ technology apparel program.
- ▶ A U.S. workwear company is expanding the use of their TOUGH COTTON™ technology apparel offerings.
- ▶ A well-known childrenswear brand has concluded trial work to use the TOUGH COTTON™ technology.
- ▶ A well-known U.S. department store is expanding the use of the TOUGH COTTON™ technology on their children's apparel.
- ▶ An outdoor apparel company has launched the TOUGH COTTON™ technology on a men's shorts program and plan to expand into men's pants and shirts later this year.
- ▶ A well-known apparel company is currently running TOUGH COTTON™ technology trial work.
- ▶ A well-known U.S. workwear company is continuing its STORM COTTON™ technology apparel program and is in trial work to add it to a garment along with TOUGH COTTON™ technology to promote dual technology features.
- ▶ A well-known U.S. young women's apparel company has completed STORM COTTON™ technology trial work on a hoodie program.
- ▶ A major sheeting supplier has signed a CDA to begin conducting RESTech COTTON™ technology trial work.
- ▶ A vertical sheeting supplier is in trial work for a potential RESTech COTTON™ technology adoption.
- ▶ A well-known athletic apparel brand has relaunched its TransDRY® technology program on men's tees and plans to expand it to include ladies' performance tees.
- ▶ A well-known European men's brand is in trial work to use the TransDRY® technology.

- ▶ A classic U.S. brand is continuing to run PUREPRESS™ technology on its men's and women's shirt program in addition to its boy's pant program.
- ▶ A high-end men's retailer is continuing the use of the PUREPRESS™ technology on their pants program.
- ▶ GSCM recently launched a new trade campaign "Cotton Can." The campaign challenges industry professionals and decision-makers in the apparel, home, and nonwoven markets with the question, "What will you create?" This initiative will extend into hundreds of print, digital, social, and tradeshow placements. Messaging aims to showcase the versatile attributes of cotton from its sustainability and performance to its innovative design capabilities. The campaign also spotlights the Seal of Cotton trademark and CottonWorks™ platform as a premium resource to the industry. Messages were tested with 250 textile decision makers through third-party research. Over 90% of respondents indicated the message would drive them to use more cotton.
- ▶ The CottonWorks™ platform continues to be an important marketing tool for the GSCM division with over 350,000 pageviews to date.
- ▶ Efforts continue to promote cotton in the digital product creation space. GSCM is exploring digital core basic collection in addition to exotic fabrics through FABRICAST™ collection.
- ▶ Staff collaborated with a leading fashion digital company to produce a virtual fashion show to promote CottonWorks™ resources, digital fabric library, and draw attention to mill partners' FABRICAST™ commercialization projects. More than 30 FABRICAST™ commercialization projects were featured in the video. This 3D company included on their webpage, a link to the CottonWorks™ website to promote Cotton Incorporated's digital fabric library and FABRICAST™ collections.
- ▶ Staff continued to work with regional textile mills to commercialize and digitalize 15 styles from FABRICAST™ Inspirations adoptions, to promote more brand adoptions and drive awareness to FABRICAST™ Library and download digital fabric files.
- ▶ Staff continued to work with regional textile mills to commercialize cotton performance technologies.
- ▶ An Australian activewear brand commercialized 20,000 units of cotton tees with TransDRY® finishing. Products were distributed in the Australian markets and put online for sale to global markets.

- ▶ An Australian casual wear brand adopted the TransDRY® technology on 20,000 units of men's and women's cotton/spandex tees and tanks. The products were for sale in the Australian markets.
- ▶ An Australian underwear and casual wear brand adopted the TransDRY® technology on cotton underwear for the Australian markets. A total of 1,450,000 units were distributed during the first half of 2024. The same Australian brand commercialized some 500,000 pairs of cotton blended socks with TOUGH COTTON™ technology.
- ▶ A leading French apparel brand adopted TOUGH COTTON™ technology on men's, women's, and kids' 100% cotton tees for the European market and online sales for the global market. A total number of 900,000 units of cotton tees were produced.
- ▶ A leading global sportswear brand produced 30,000 units of men's and women's hoodies and pants with STORM COTTON™ technology. The products were distributed globally.
- ▶ A leading global sportswear brand teamed with a renowned high performance German automotive brand to adopt STORM COTTON™ technology on their cotton hoodies line for men and women. The products were distributed in the global market.
- ▶ A Chinese vertical mill developed 100,000 meters of PUREPRESS™ technology shirting fabric for an Indian apparel brand. The end products will be distributed in the Indian markets.
- ▶ A Chinese vertical mill developed 200,000 yards of TransDRY® treated denim Fabric for a U.S. global denim brand. The end products will be distributed in the U.S. markets.
- ▶ A leading fashion sportswear brand continued their commercialization of TOUGH COTTON™ technology cotton products for the second consecutive year. A total of 13,343 pieces of 100% cotton jersey tee shirts were produced for sale in the China market for the first half of 2024.
- ▶ A Hong Kong based vertical mill adopted TOUGH COTTON™ technology on jersey for two U.S. mass merchants. A total of 2,880,000 pounds of cotton fabric were produced with end products being distributed in the U.S. markets.
- ▶ A Japanese fast-fashion retailer worked with a Chinese trading company and a Chinese mill to adopt TOUGH COTTON™ technology on jersey and rib fabric. The end products were 120,000 pieces of cotton apparel which were distributed in the Japanese markets.
- ▶ A Chinese mill adopted TOUGH COTTON™ technology on jersey and rib fabric for a Japanese retailer. A total of 70,000 pieces of cotton apparel were produced and distributed in the Japanese markets.

- ▶ A Chinese vertical mill adopted TransDRY® technology on jersey for an Australian surfing brand. The mills produced 803 pounds of fabric and the end products were distributed in the Australian markets.
- ▶ A Chinese trading company/textile mill produced 20,000 pieces of TOUGH COTTON™ technology products for a Japanese workwear brand. The products were distributed in the Japanese markets.
- ▶ A Chinese textile mill developed 13,000 pieces of TOUGH COTTON™ technology products for a U.S. outdoor brand for the U.S. markets.
- ▶ Staff participated in a total of 74 meetings (physical and virtual) to provide technical marketing information and technical assistance to regional mills and brands to adopt cotton performance technologies.
- ▶ Staff assisted a fabric manufacturing supplier in Taiwan to adopt PUREPRESS™ finish on shirting fabric for a European online brand for its high-quality men's fashion.
- ▶ Staff assisted a knitting mill in Thailand successfully develop PUREPRESS™ technology on knit fabric.
- ▶ Staff assisted two fabric manufacturing suppliers in Taiwan to develop RESTech COTTON™ technology on home textiles to be marketed to their global customers.
- ▶ Staff assisted a home textile mill in China develop RESTech COTTON™ technology on woven plain fabrics for a U.S. retail store.
- ▶ Staff assisted a vertical knitting mill in Pakistan develop TransDRY® technology on knit fabrics for a leading Germany-based apparel brand.
- ▶ Staff assisted a trading company in Indonesia develop WICKING WINDOWS™ finish on knitted and woven fabrics for an American manufacturer of athletic clothing and women's workout clothes.
- ▶ Staff assisted two mills in China to adopt STORM COTTON™ technology for two U.S. brands.
- ▶ Staff assisted a fabric manufacturing supplier in Vietnam to adopt STORM COTTON™ non-fluorine finish on knits and wovens to be marketed to their global partners.
- ▶ Staff assisted two fabric manufacturing suppliers in Taiwan develop STORM COTTON™ technology on cotton fabrics for two global U.S. sportswear brands for the U.S. markets.

- ▶ Staff assisted a trading company in Korea develop STORM COTTON™ technology on woven fabrics. This company got inspiration for this project while visiting Cotton Incorporated's booth at Functional Fabric Fair in Portland, OR.
- ▶ Staff assisted a Hong Kong-based vertical mill develop STORM COTTON™ technology on fleece for a leading U.S.-based casualwear brand.
- ▶ Staff assisted a knitting mill in Thailand develop STORM COTTON™ technology on 85/15 cotton/spandex jersey for two Japanese fast fashion brands.
- ▶ Staff assisted an Indonesian textile mill to adopt TOUGH COTTON™ technology for a U.S.-based workwear brand.
- ▶ Staff assisted a Hong Kong fabric supplier to adopt TOUGH COTTON™ technology without resin finish on knits for a U.S. children's wear brand. The fabric supplier would work with their own fabric mill in China or their partnering mills in South Korea and Vietnam.
- ▶ Staff assisted a fabric supplier in South Korea develop TOUGH COTTON™ technology without resin finish on knits to be marketed to their global partners.
- ▶ Staff assisted a fabric manufacturer in Indonesia develop TOUGH COTTON™ technology without resin finish on 100% cotton woven fabrics for a U.S. casualwear brand.
- ▶ Staff assisted two trading companies and a mill in China develop TOUGH COTTON™ technology on flannel, jersey, and rib fabrics, for a U.S. workwear brand, a Japanese casualwear brand, and a U.S. lifestyle brand.
- ▶ Staff assisted a mill in China develop TOUGH COTTON™ technology on jersey, rib, and French terry fabrics for a Japanese trading company.
- ▶ Staff assisted a mill in China develop TOUGH COTTON™ technology on French terry for an Australian casualwear/underwear brand.
- ▶ Staff assisted a woven mill in Pakistan develop TOUGH COTTON™ technology without resin finish on woven fabric for a French leading ready-to-wear clothing brand.
- ▶ Staff assisted a fabric agent in India develop TOUGH COTTON™ technology without resin finish on knitted fabric for a U.S. online and mail order company specializing in children's wear.
- ▶ Staff assisted a woven mill in Bangladesh develop TOUGH COTTON™ technology on woven fabric for a U.S. leading global apparel brand.

- ▶ Staff assisted three companies in Hong Kong to develop TOUGH COTTON™ technology on knit fabrics.
- ▶ Staff assisted an Indonesian trading company develop dual function technology on woven fabrics. STORM COTTON™ and TOUGH COTTON™ technologies were applied on cotton down jackets to be marketed to their global partners.
- ▶ Staff assisted a sourcing company in Hong Kong and a yarn supplier in China develop dual function technologies on cotton sweaters. STORM COTTON™ and TOUGH COTTON™ technologies were developed for a U.S. workwear brand. The same brand worked with a vertical mill in China to develop the same dual function technologies on woven fabrics.
- ▶ Staff assisted a weaving mill in Hong Kong develop TOUGH COTTON™ and NATURAL STRETCH™ technologies for a U.S. global denim brand.
- ▶ Staff provided technical guidance to a Peruvian textile and apparel manufacturer to develop an elevated version with softer hand of the TransDRY® technology for a U.S. activewear brand.
- ▶ Staff provided technical assistance to four Guatemalan knitting and apparel manufacturers to either continue or to start the implementation of the TOUGH COTTON™ technology for a U.S. mass merchant's program.
- ▶ Staff provided technical support to a Colombian textile mill to develop a heavy weight cotton-rich French terry fabric.
- ▶ Staff provided technical support to a Peruvian knitting mill to set the technical basis for developing a cotton stretchable knit without spandex.
- ▶ Mexico City staff continued expanding and/or protecting cotton's market share through the promotion of the Seal of Cotton trademark in Latin America. One new licensee and one trademark product extension was executed. Staff is working with another six Mexican and Peruvian mills and brands to become licensees in 2024.
- ▶ Staff in Turkey have several projects ongoing with major mills and manufacturers which include technology marketing, technology trials, and additional signing of CDAs for interest in additional technologies. Many of these trials are for programs for major brands and retailers in the U.S.

### **Tactic: Pursue Initiatives in Nontraditional Markets**

Program Activity: Expand cotton's market share in consumer, institutional, and industrial markets.

## Current Status

- ▶ Two hundred seven companies have licensed the **enhanced**<sup>™</sup>, **natural**<sup>™</sup>, and Seal of Cotton trademarks in total for Nonwovens. In 2024, seven new agreements were secured, along with 11 trademark adoptions, including four **enhanced**<sup>™</sup>, three **natural**<sup>™</sup>, and four Seal of Cotton trademarks. Countries include U.S., Poland, Korea, and Spain, and distribution includes U.S., Korea, and worldwide. Sixty-four swag boxes were distributed worldwide as a new marketing initiative in licensing.
- ▶ In 2023, staff completed trials for a 2024 launch targeting synthetic plastic reduction in baby products. In 2024, they will continue trials for period care and moist toilet tissue (MTT) for a 2025 launch. Marketing is being prepared for two cosmetic grade wipes featuring cotton, including an oil remover technology, for the NACDS Total Store Expo in 2024.
- ▶ Staff created new brochures and reports for the CottonWorks<sup>™</sup> website, including insights on the Seal of Cotton trademark and how to license it, consumer insights on period care and baby care, and curated content for the nonwovens industry on CottonWorks.com/Nonwovens, covering various aspects from consulting to supply chain and the sustainability of cotton for nonwovens.
- ▶ Staff is launching innovative marketing programs covering category insights, trademark licensing, and promotions. This includes developing a Market and Insights Dashboard with Euromonitor International to identify cotton product opportunities, testing a new licensing portal for Seal of Cotton trademarks, and showcasing products at events like the Natural Products Expo West, with successful engagement metrics driving further investment.
- ▶ Staff actively participated in trade events, such as conferences and tradeshows, with recent highlights including a partnership with the Blue Jeans Go Green<sup>™</sup> team at Natural Products Expo West, where circular economy was showcased. The Seal of Cotton trademark licensing program and recycled cotton was promoted and distributed in 3,000 tradeshow bags. National campaign messaging was integrated into the Product Showcase display and is gearing up for ECRM and TSE tradeshows to highlight cotton's positioning in the baby care market. Additionally, staff prepared marketing materials for ECRM and TSE Meet the Market events, where they met with approximately 20 buyers in eight hours, events that facilitated roughly 40 total meetings with key industry players.
- ▶ Nonwoven's broad advertising strategy spans eight influential trade publications and now targets mass market retailers to attract merchants. The marketing plan focuses on four key messages: hypoallergenic for babies, trustworthy Seal of Cotton trademark, sustainable production, and sourcing directories, which will be featured in both print and digital ads. Additionally, sponsored content features will highlight the Seal of Cotton trademark program and product showcases, aimed at boosting attention for the August tradeshow booth and showcase.



## **Tactic: Fashion Marketing**

Program Activity: Market fiber/fabric through fashion marketing presentations to influence cotton use in design and product development.

### Current Status

- ▶ Staff completed the Fall/Winter 2025/2026 presentation, along with additional visuals.
- ▶ Staff completed the Active 2026/2027 presentation, along with additional visuals.
- ▶ Staff completed the Denim 2025/2026 presentation, along with additional visuals.
- ▶ The Spring/Summer 2026 season presentation began production in early June and is due to be completed in August.
- ▶ In North America, a total of 39 presentations (eight virtual) have been made and there were a total of 703 attendees.
- ▶ In Asia, 11 presentations (three virtual) were made. A total of 436 attendees across nine countries participated.

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## **Strategic Objective 3: Conduct technical education and training to support cotton use**

### **Tactic: Implement Activities of the Importer Support Program**

Program Activity: Manage the ISP programs.

### Current Status

- ▶ In the first half of the year, 20 out of 41 scheduled technical education workshops were executed in support of cotton use. “Denim Manufacturing” and “Value Engineering” are two of the most popular topics.
- ▶ The 2024 Cotton in the Curriculum program is underway with 29 grants from 27 U.S. universities and emerging professionals.
- ▶ The retailer and brand farm tour program is scheduled for later this year. Planning is underway.
- ▶ Staff is focused on creating and promoting relevant, up-to-date, and new content for the CottonWorks™ website, particularly targeting sourcing, traceability, sustainability, and circularity. Search engine marketing and digital marketing continue to be good tactics to drive decision makers to the new content.
- ▶ The Educate The Educators program was successfully held in June. The goal of this program is to educate university professors on cotton sustainability.
- ▶ Special projects on composting and traceability are underway as part of the special projects initiative.

- ▶ The 2024 Cotton Sustainability Summit will be held in September 2024. The planning for this event is underway.

# Global Supply Chain Marketing

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## Explanations of terms and activities

- ▶ **Cotton Council International (CCI):** CCI is responsible for the international promotion of U.S. cotton primarily, but not exclusively, through the COTTON USA Mark program. The majority of CCI's promotion funds are from the USDA's Market Access Program, which is administered by the Foreign Agricultural Service. Cotton Incorporated is the largest private contributor to CCI, and these private funds are leveraged an estimated two to four times the amount of government funds. Cotton Incorporated staff work closely with CCI to ensure that the funded programs are complementary to the international activities. In many cases, CCI's programs are part of a joint effort with Cotton Incorporated staff.
- ▶ **Cotton Incorporated Sponsored Events:** Cotton Incorporated is often the host or primary sponsor of industry trade events.
- ▶ **Digital Supply Chain initiative:** Refers to an initiative in the GSCM division in an effort to enhance the division's marketing capability by incorporating the latest and most widely used 3D textile design tools.
- ▶ **FABRICAST™ Collection:** The FABRICAST™ collection is a collection of knit and woven fabrics used to provide the industry with direction and inspiration for product development.
- ▶ **Global Supply Chain:** This refers to the network of companies and organizations involved with the manufacturing, sourcing, development, and retailing of textile products and related products such as chemicals and equipment.
- ▶ **ISP Workshops:** These technical education workshops are funded under the Importer Support Program.
- ▶ **Suppliers:** For each technology marketed by Cotton Incorporated, part of the marketing strategy often involves identifying and working with manufacturers in the supply chain who can market and provide products to interested retailers, brands, or other companies. Cotton Incorporated works with and through established industry manufacturers to further the company's marketing ability and reach.
- ▶ **Tradeshows:** This term refers to industry events that often involve formal conference programs as well as exhibit and booth space. Examples of some of the more prominent tradeshows include Outdoor Retailer, Shanghai Intertextile, and Functional Fabric Fair.



# Consumer Marketing Committee

## Executive Summary

### Advertising

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GALE, the newly appointed creative agency, and the Advertising department aligned to a 2024 (and beyond) strategic platform, *The Fabric of Now™*. This full scale 360<sup>0</sup> effort launched in April 2024 with :06 second and :15 second commercials, as well as (new for this year) a :30 second commercial. The video is placed across key Prime T.V. units like *Will Trent*, *The Rookie*, *American Idol*, and *911* as well as cable channels such as Bravo, HGTV, and The Food Network. The streaming buy is placed across Amazon, CW FEP, Discovery+, Hulu, MAX, Netflix, Peacock, Roku, Tubi, and YouTube. To date, TV, Cable, and Streaming has garnered 113M impressions.

Aligning with *The Fabric of Now™* platform, the Digital and Social Media efforts are focused on a “fewer, bigger and better” approach across partners. The Digital plan began across ad serving networks Viral Gains, Zefr, and Nexxen. Custom units with key lifestyle publications: Well+Good, Dot Dash Meredith, Dear Media Podcast Network, and Dexerto Gaming will run from May – December with customized influencer programs, podcasts, in-person activations, and editorial-style content. Paid Social Media efforts across Meta (Facebook/Instagram), Tik Tok, Pinterest YouTube, and Snapchat launched in May (and will run through December) with a variety of Influencer, Brand, and UGC content. Each one of the 13 Digital and Social partners are providing a Brand Lift Study with the program, adding another key learning by media partner.

In March 2024, the department expanded its youth curriculum program to reach older students (9<sup>th</sup>-12<sup>th</sup> grade) to continue the cotton education as applicable to young people (i.e. “how a crisp cotton outfit is a job interview must” as well as a “be prepared for the big game with a good night’s sleep on cotton sheets” etc.) This effort included an additional 184,000 educators across the country. The program is now inclusive of 2<sup>nd</sup>-12<sup>th</sup> grade students. Seeding the cotton natural plant story with 2<sup>nd</sup>-4<sup>th</sup>, the cotton STEM and Sustainability story with 5<sup>th</sup> -8<sup>th</sup> and adding practical uses to 9<sup>th</sup> – 12<sup>th</sup>. In this way, the department is curating a pipeline of educated and empowered future consumers.

In 2024, Advertising continues to support MacroTrade across Digital and Print publications along with a robust LinkedIn lead generation campaign. The program launched a new creative campaign in 2024 featuring the benefits of cotton sustainability and versatility.

### Corporate Communications

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For the first half of 2024, the Corporate Communications department estimates over 970 news items about the Company and its activities, representing a reach of over 10.15 million. While the number of news items decreased, the audience increased significantly due to targeted outreach.

Notable among the Corporate Communications department's accomplishments for the first half of 2024 were activities in support of the sustainability of U.S. cotton, the Corporate Strategy & Insights (CSI) department and its consumer and retail trends data, consumer-facing corporate initiatives such as the Blue Jeans Go Green™ denim recycling program, and further amplification of the cottonseed and cottonseed oil industry. The department also worked more closely with the Global Supply Chain Marketing department on several occasions to promote the work being done to the industry.

## **Brand Partnerships**

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The Blue Jeans Go Green™ (BJGG) program started out 2024 with returning consumer-facing retail program participants, including Anthropologie, Ariat, American Eagle Outfitters, Carhartt, Frank & Oak, Hemline, Madewell, MUJI, Paige, rag & bone, Wilco, and Zappos, along with increased interest from new retailers reaching out to learn more about the program and plan for their participation later in the year. BJGG also worked with several schools and organizations across the country interested in participating and engaging with BJGG. The program continues to thrive due to its unwavering commitment to sustainability, creating actionable opportunities as well as providing information not only to brands and retailers, businesses, and organizations, but also to the larger public about cotton's inherent circularity. The Blue Jeans Go Green™ program offers digestible information on the complex subject of sustainability, which is one of the many reasons why Cotton's endemic brands, retailers, and non-endemic businesses and organizations continue to participate and meet their social responsibility goals while educating and engaging consumers.

The Strategic and Retail Partnerships area has a substantial retail program line-up for 2024. The first half of the year included program launches with Lucky Brand, REVOLVE, and LoveShackFancy. The team is also planning programs with Aéropostale, and influencer-bred brand WeWoreWhat for the second half of the year. The variety and versatility of the five retail partners for 2024 ensures that the Seal of Cotton trademark will be highly visible to consumers as they shop. The partnerships allow for targeted cotton benefit messaging custom to each retailer's audience, curated cotton shops providing high visibility, and ease of finding cotton products to strategically encourage cotton sales from consumers of all ages. This year's mix of retailers includes high performing brands and those who provide relevancy in the marketplace. Tightening budgets, inflation, and competition from synthetic fibers has pushed the team to be resourceful and to continue to be innovative and create newness in developing unique cotton experiences at retail.

## **Corporate Strategy & Insights (CSI)**

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In the first half of 2024, CSI led efforts to identify opportunities and threats for cotton using market intelligence including ongoing research of U.S. consumers' attitudes from the Lifestyle Monitor™ survey, assessments of cotton's share through import data and the Retail Monitor™ study, as well as global market and economic research and analysis. CSI provided over 120 information requests; participated in over 70 meetings and presentations; authored 75 publications, videos, TV/radio segments, and podcasts; and worked on 14 projects.

Work completed by CSI during the first half of 2024 includes, but is not limited to: the collection and examination of data on more than six million products offered at retail in the U.S.; the evaluation of just over ten thousand U.S. and twelve thousand global consumers; the update of a comprehensive database of monthly apparel and home furnishing imports to assess sourcing patterns and tariff impacts; the management of Cotton Incorporated's brand tracking metrics; and the delivery of consumer and economic outlook presentations.



# Consumer Marketing Committee

Mid-Year 2024

## Advertising, Corporate Communications, Brand Partnerships, and Corporate Strategy and Insights (CSI)

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**Strategic Objective 1: Use advertising, public relations and strategic alliances to build consumer demand and trade awareness for cotton and cotton products as well as use market intelligence to assess opportunities and threats for cotton, influence corporate strategy efforts and leverage program metrics to evaluate and improve tactics for fulfilling Cotton Incorporated's mission**

### **Tactic: Advertising: Strategic + Creative Agency**

Program Activity: In 2023, the Advertising department conducted a full-scale Creative agency search. After carefully evaluating more than 50 agencies, inclusive of presentations, site visits and stakeholder reviews, GALE PARTNERS was selected to become Advertising's next Creative and Strategic Agency as of January 1, 2024.

#### Current Status

- ▶ Cotton led GALE through an intensive onboarding process which included evaluating past years' creative and strategy, attending a Producer Tour, meeting with key Cotton leaders, and understanding both the department's business opportunities and challenges.

### **Tactic: Advertising: Consumer Media, Video**

Program Activity: Run video content on broadcast and cable television networks such as ABC, FOX, Bravo, E! Freeform, Food Network, HGTV, and TLC, along with Streaming partners which include Amazon, CW FEP, Discovery+, Hulu, MAX, Netflix, Peacock, Roku, Tubi, and YouTube.

#### Current Status

- ▶ *The Fabric of Now*<sup>TM</sup> is a full scale 360<sup>0</sup> effort launched in April 2024 with one :30 second, two :15 second and :06 second videos (commercials). This campaign has been live since its launch on April 22 across both Linear Television (Broadcast and Cable) and Streaming platforms to drive awareness of the new campaign. The Linear portion of the campaign ran for a 5-week flight in 2Q'24 and will resume once again at the end of September 2024. The Streaming portion of the campaign is always on through the end of 4Q'24.
- ▶ Linear TV Overall: 51,267,400 WM18-49 Impressions/15,033,100 WM18-34 Impressions as of 5/31. Projected to deliver 62,086,100 WM18-49/18,114,100 WM18-34 through 2024.
- ▶ Streaming Overall: 61,870,772 WM18-34 Impressions as of May 31. Projected to deliver 228,314,854 WM18-34 impressions in the full 2024 year.
- ▶ Cotton purchased ABC and FOX in Prime in the 2024 year, same as prior years. Cotton will also be starting to shift away from Cable in the 2024 year, with the daypart being eliminated for the 4Q'24 flight due to careful evaluation of cost vs return on investment.

The Cable networks that ran in 2Q'24 were Bravo, E! Freeform, Food Network, HGTV, and TLC.

- ▶ Rounded out the buy with a presence in Digital Video with the following partners: Amazon, CW FEP, (Discovery+, Hulu, MAX, Netflix, Peacock, Roku, Tubi, and YouTube. In the fourth quarter, new partners will be introduced to the buy including Amazon Prime Video and Paramount+. Older skewing and low performing partners CW FEP and Tubi will be removed from the buy for the fourth quarter. (FEP = Full Episode Players).
- ▶ As a liability wipe for Cable linear under-delivery, Cotton ran a TikTok Met Gala campaign with NBCU, flighted from 5/3/24-5/17/24. The campaign delivered a total of 10,004,731 P2+ impressions in 2024.
- ▶ Reporting:
  - The long-running Q two-Q four Brand Tracker is fielding consistently from April – December (mid-campaign results in July); and
  - New this year, a Cross Channel Kantar Media Study is fielding April – December (mid-campaign results in August).

### **Tactic: Advertising: Consumer Media, Digital**

Program Activity: Digital campaigns that extended across Video Ad Serving Networks, Digital Banners, Site Takeovers and Custom Partnerships. Campaigns inclusive of :30s and :06s assets through digital video partners, keyed into static assets for digital banners and site takeovers and also keyed into custom content developed by select digital partners. The digital campaign is projected to deliver more than 98.1M impressions. The campaign has delivered 558,803 impressions as of May 31.

#### Current Status

- ▶ Digital Video Placements: Ads Serving Networks like Viral Gains, Zefr, and Nexxen.
  - Viral Gains: not live, projected to deliver 30,163,158 impressions.
  - Zefr: not live, projected to deliver 17,051,184 impressions and 3,900,000 video views.
  - Nexxen: not live, projected to deliver 26,555,556 impressions.
- ▶ Digital Banners and Site Takeovers:
  - Custom partner Dotdash Meredith is running display banners through D/Cipher which can use intent targeting and will run a First Impression Takeover Package around a key Fall date for cotton (National Farmers' Day, World Cotton Day, America Recycles Day, etc.)

- Custom partner Well+Good is running an enhanced digital video banner, added value display banners, and a custom takeover of their shoppable hub through the end of the year.
  - Viral Gains will run custom placements including digital banners with an interactive quiz unit and a custom mobile rich media unit.
- ▶ Custom Partnerships: Custom units with key lifestyle publications: Well+Good, Dotdash Meredith, and Dear Media Podcast Network will run with customized influencer programs, podcasts, in-person activations, and editorial-style content. Additionally, a series of custom content features will be developed (infographics, curated content, and social amplification) through the Media and Influencer Partnerships.
- Well + Good: delivered 244,997 impressions as of May 31, projected to deliver 16,485,811 impressions.
  - Dot Dash Meredith: delivered 313,813 impressions as of May 31, projected to deliver 20,053,644 impressions.
  - Dear Media: not live, projected to deliver 8,290,000 impressions.

Program Activity: Paid Social Media efforts across Meta (Facebook and Instagram), TikTok, Pinterest, YouTube, and Snapchat launched in May. The paid social campaign is projected to deliver 158.5M impressions. The campaign has delivered 13.3M impressions as of May 31.

#### Current Status

- ▶ Meta (Facebook/Instagram or FB/IG): Media support launched on May 21 and will be live through the end of year. Leveraging Meta’s traffic objective, the campaign is focused on increasing consideration and prompting users to visit the landing page.
  - A mix of brand messaging creatives including single image and short-form video are served across the two platforms, on mobile and desktop, in the following placements - FB/IG Feed, Explore, Stories and Reels.
  - The campaign targets users (A18-39 in the United States) that fall within Cotton’s primary lifestyle cohorts, working to connect with those interested in Style (clothing/fashion), Self (beauty/self-care), and Space (home products). In the retargeting phase, Meta’s robust audience capabilities are leveraged to re-connect and re-engage with past website visitors.
  - The Meta campaign is projected to deliver 69.6M impressions. As of May 31, this campaign has delivered 3.1M impressions.
  - Reporting: A brand lift study has been added to the program, running from launch through July 15, and polls three questions to gauge the lift in brand awareness, attribute rating, and consideration among users that fall within the audience targeting.



- ▶ Pinterest: Launched on May 20 and running through the third quarter, the Pinterest campaign is set to drive consideration via the Traffic objective, optimizing towards users most likely to outbound click onto [www.thefabricofourlives.com](http://www.thefabricofourlives.com).
  - Currently, a mix of short-form video and single image brand creatives are delivered in the Pin feed and Search feature.
  - The campaign targets users (A18-34 in the United States) who are interested in or search for keywords related to the core interests of Style (clothing/ fashion), Self (beauty/self-care), or Space (home products), while also retargeting users who engaged with 2023's TFOL Pin ads (plus a lookalike audience).
  - Pinterest is projected to deliver 20M impressions over the flight. As of May 31, the campaign has delivered 6.9M impressions. Cotton received \$25,000 in an added value platform coupon that will reflect in media spend for the second half of the year.
  - Reporting: A first-time brand lift study was unlocked and added to the program, running from launch through June 23, leveraging two polling questions to gauge the lift in awareness and purchase intent driven by users viewing cotton ads.
- ▶ Snapchat: Media went live on May 23 and will run through July 17, driving consideration by leveraging the Traffic objective for the Snap Ad format.
  - The primary optimization goal is to prompt landing page views, while taking advantage of the premium forced-view commercial ads which increase impressions. Commercial ads consist of six second brand videos, while the Snap Ads promote ten second brand videos.
  - The campaign targets users (A18-39 in the United States) who are interested in Style (clothing/ fashion), Self (beauty/self-care), or Space (home products), along with re-connecting to users who viewed 2023's TFOL Snap ads, plus a balanced lookalike audience.
  - The Snap campaign is projected to deliver 6.1M impressions. The campaign has delivered 3.3M impressions as of May 31.
  - Reporting: A brand lift study has been added to the program, running the duration of the campaign, and polls three questions to gauge the lift in awareness and message association driven by users viewing cotton ads.
  - TikTok: Pending launch, the TikTok campaign will run through December 31.
  - This campaign will consist of three components: a premium Top-Feed placement optimized for impressions, in which the Cotton ad will occupy the first in-feed ad

slot that appears on someone's TikTok feed when they open the app; a standard For-You Page placement optimized for landing page views, and a brand-new Search Feed placement, optimized for landing page views.

- Based on Tik Tok best practices, this content will be Influencer and User Generated Content (UGC) focused.
- The campaign will target users (A18-39 in the United States) who are interested in Style (clothing/ fashion), Self (beauty/self-care), or Space (home products). The For-You Page placement and Search Feed placement ads will retarget users who viewed premium Top-Feed ads. We plan to feature Influencer content via short-form videos.
- The TikTok campaign is projected to deliver 62.7M impressions. A brand lift study will be added to the program, details to come once launch is determined.

Program Activity: Influencer Outreach: Influencers are no longer only part of Social Media—they are media channels in and of themselves. They are critical for niche communities, diverse voices, and trusted perspectives, all very important to Gen Z (the key target audience). From buzzworthy creators to hardworking educational content, their authentic engagement, extended reach, and content creation powers help stoke reconsideration in an authentic, trusted, and always-on manner.

#### Current Status

- ▶ This Summer, the Advertising department is partnering with mega-influencer Melissa Wood Tepperberg across social, public relations, experiential activations, and podcast media. Melissa has over 1.4 million followers on Instagram and a dedicated following squarely in the target demographic.
- ▶ This holistic collaboration, with Melissa serving as a lead influencer, will introduce the target to *The Fabric of Now*<sup>™</sup> platform and amplify the Cotton positioning with supporting (five-six) influencers across style, self, and space on an ongoing basis.

Program Activity: Public Relations: With the goal to establish Cotton as a culturally resonant brand, developing consumer media outreach according to approved strategy.

#### Current Status

- ▶ Includes development of an editorial pitching calendar as well as capitalizing on trends and relevant opportunities as available. Also identifying and contracting Subject Matter Experts (SMEs) in support of pitching opportunities.

Program Activity: Continue robust SEM and SEO efforts to maintain cotton as a key search term.

#### Current Status

- ▶ SEO: In the first half of 2024, SEO has driven 190,913 visits to TFOL (January 1-May 31), an increase of 17 percent compared to same time frame in 2023. Multiple deliverables have been completed to date including a link building Authority Analysis, a Market Trends

analysis, and a Technical analysis. The second half of 2024 anticipates a full site optimization. Reassessment is planned along with a new Keyword Strategy and Content Gap analysis.

- ▶ SEM: In the first half of 2024, Paid Search has driven 560K clicks to The Fabric of Our Lives website through Google Ads. The top driving campaigns for 2024 continue to be the Shop and Care pages accounting for 85 percent of click traffic. The top performing keywords from these campaigns are men's jeans, women's jeans, how to remove ink from fabric, how to get blood out of fabric, and cotton clothing for women. Year Over Year (YoY) clicks have -16 percent on flat spend as compared to 2023. This can be attributed to Cost Per Clicks (CPCs) 19 percent YoY as more competitors bid on similar keywords. Ad engagement across campaigns 9 percent YoY, with Click Thru Rate (CTR) improving from 13.57 percent to 14.83 percent YoY.
- ▶ On April 1, the Mindshare team implemented Responsive Search Ads (RSAs) in the Blue Jeans Go Green™ campaign and generated 6.1K clicks to bluejeansgogreen.com with a CTR of 10.93 percent. In the last two months of data (April 1 – May 31) the Blue Jeans Go Green™ campaign has generated 4 percent more clicks on 3 percent more spend. Additionally, clicks were 1 percent more efficient with CPC decreasing by \$2.25 to \$2.23 when compared to the previous period (February 1 – March 21). As requested, Mindshare incorporated [Madewell Recycling] to the BJGG campaign and has been one of the top performing keywords with 427 clicks, CTR of 20.63 percent and AVG CPC of \$2.40.

Program Activity: Gaming: 2024 will continue to grow cotton within the Gaming vertical bringing *The Fabric of Now™* to the very popular category of “Cozy Gaming.” Includes identification and contracting of four well-known influencers within the space, development of tradeshow presence at DreamHack 2024, development of a bespoke “Cozy Game,” and earned media opportunities to extend impact of Cotton within the gaming space.

#### Current Status

- ▶ Launching in October 2024, Cotton's Gaming partnership with Dexerto will include custom social promotion created by hand-selected “cozy gaming” talent, a Cotton-branded mini game built by Dexerto's team for use across Cotton's own social channels and websites, as well as a custom experiential moment at Dreamhack Festival, a popular e-gaming conference, in addition to rotational media placements.

Program Activity: Support of Brand Partnerships (Blue Jeans Go Green™ and Retail Partnerships) with both paid and organic social media, as well as digital efforts to amplify the Brand Partnerships messages.

#### Current Status

- ▶ On April 24th, Blue Jeans Go Green™ launched a Meta campaign for the retail partnership with Hemline across Facebook and Instagram. Running through April 30, it geotargeted women ages 25-53 within 25 miles around select Hemline retail locations, serving one single image ad to increase awareness of the denim recycling program. This campaign drove 2,474,573 impressions.

- ▶ In the first of 2024, Advertising supported Retail Partnerships within program for LoveShackFancy, WeWoreWhat, and Revolve. For the second half of 2024, Advertising intends to support Aeropostale efforts in the fourth quarter.
- ▶ The Advertising department layered in strategy and brand POV *The Fabric of Now™* within existing retail partnerships of REVOLVE, Lucky, and LoveShackFancy.
- ▶ Co-developed creative messaging and PR pitch angles with partners to ensure proper Cotton inclusion. Collaborated on partner influencer, messaging, and social rollout to maximize cross-channel moments including Cotton organic channels. This incorporated current retail partners into shoot for maximum discoverability.
- ▶ (Continued collaboration with WeWoreWhat's upcoming launch in September, ongoing REVOLVE partnership, and in-person event, along with an Aeropostale launch in the Fall. Including the development of shared messaging brief and suggested updates to Retailer-developed materials considering Cotton Incorporated's platform messaging (*The Fabric of Now™*) and insights.

### **Tactic: Advertising: Trade Media**

Program Activity: Run print, digital, and social ads in domestic and international publications and websites promoting a range of relevant industry topics from Cotton Incorporated resources, sustainability, innovations, technologies, and Lifestyle Monitor™.

#### Current Status

- ▶ In 2024, Advertising continues to support MacroTrade across digital and print publications along with a robust LinkedIn lead generation campaign.
- ▶ Reporting: New in 2024, MacroTrade will be utilizing a Brand Lift Study to measure performance.
- ▶ Digital Activity Overall: delivered 3,904,298 impressions and 5,447 clicks through May 31. The digital MacroTrade campaign is expected to deliver over 2,770,000 impressions (not inclusive of *EcoTextile News*, who does not provide impression projections).
- ▶ LinkedIn: Paid social support of the MacroTrade campaign launched on LinkedIn on April 22 and will run through the end of year (EOY), optimizing for landing page views to drive traffic to the CottonWorks™ Website.
- ▶ The campaign showcases multiple static images, videos, and carousel creatives.
- ▶ Targeting is focused on reaching individuals in the relevant employment fields within the Supply Chain decision-making process, and retargeting those who viewed or engaged with ads in 2023-2024 with more detailed creatives. The creatives promote the cotton traceability and sourcing education tools on the site.

- ▶ The LinkedIn campaign is projected to deliver 2.3M impressions. The campaign has delivered 844K impressions as of May 31.
- ▶ Reporting: A brand lift study has been added to the program, running from launch through June 30, and polls two questions to gauge the lift in brand awareness and aided program awareness driven by users viewing Cotton ads.
- ▶ Print: *EcoTextile News* insertions (five) in April, June, August, October and December. *Rivet* insertions (two) in April and September.

### **Tactic: Advertising: Production**

Program Activity: GALE and the Advertising department aligned to a 2024 (and beyond) strategic platform, *The Fabric of Now™*. Development of campaign Video, Digital and Social Media assets to be supported with Paid Media (management of talent and residuals).

#### Current Status

- ▶ Tapped a highly culturally-resonant insight to reframe The Fabric of Our Lives® for a modern female target. While consumers lead overwhelming, fast moving lives they ultimately crave distance from distractions and yearn to be more intentional and present. *The Fabric of Now* positions Cotton to lead this timely mindfulness conversation authentically, breaking through the clutter and driving reconsideration of cotton in their purchasing habits.
- ▶ Always-on platform versus campaign-based focus areas. Maximize frequency and consistency with *The Fabric of Now™* (within the iconic The Fabric of Our Lives®); consistently connect brand to consumers, driving real demand and fostering continuous engagement.
- ▶ From mass reach to higher frequency: The target was tightened to capture the next generation of cotton consumers who will advocate for cotton (fashion female age 18-39)
- ▶ To date, Advertising has created over 40 fully shoppable assets (and counting) from an efficient one-day video and still capture to support always on media efforts inclusive of linear TV, streaming, social and digital channels, and media partners.
- ▶ Upcoming asset library development to round out assets and ensure optimizations to always on campaigns, continue to enhance representation of consumers and provide context within media partner focus areas.

Program Activity: Produce and manage Social Media calendars, content, community engagement, and maintenance of existing and launching of channels.

#### Current Status

- ▶ Developed updated social media playbook within *The Fabric of Now™* to create inspirational and empowering consumer content around Intention, Sustainability, and Education.

- ▶ (Ongoing) launched 148 pieces of content with organic reach of 60,000+ impressions across Meta, Pinterest, and TikTok.
- ▶ Looking ahead, add boosting efforts to maximize reach within social ecosystems and increase follower count.

Program Activity: Develop, produce, and execute experiential ideas in support of key messaging and tentpoles.

#### Current Status

- ▶ Proposal of brand actions for 2024, positioning Cotton as a brand that shapes culture; inclusive of retail partnership plus-ups, technology partners and scalable earned ideas. Includes outreach to potential partners and Request for Proposal (RFP) documents for ongoing pitching.

Program Activity: Cotton’s youth initiatives directed toward elementary through high school aged young people to educate around cotton sustainability, STEM, “dirt to shirt” process as well as cotton’s practical applications to young people (i.e. getting a good night’s sleep, how jeans are made, etc.)

#### Current Status

- ▶ In March 2024, the department expanded its youth curriculum program to reach older students (9<sup>th</sup>-12<sup>th</sup> grade) to continue the cotton education as applicable to young people (i.e. “how a crisp cotton outfit is a job interview must” as well as a “be prepared for the big game with a good night’s sleep on cotton sheets” etc.) This effort included an additional 184,000 educators across the country.
- ▶ The program is now inclusive of 2<sup>nd</sup>-12<sup>th</sup> grade students. Seeding the cotton natural plant story with 2<sup>nd</sup>-4<sup>th</sup>, the cotton STEM and Sustainability story with 5<sup>th</sup>-8<sup>th</sup> and adding practical uses to 9<sup>th</sup> – 12<sup>th</sup>. In this way, the department is curating a pipeline of educated and empowered future consumers.
- ▶ Total Views (to date in 2024): 197,054 and downloads 49,009, digital quiz clicks, 31,127, 17M impressions.
- ▶ Since 2019, the program has seen over 800K downloads.

Program Activity: Drive traffic to TheFabricOfOurLives.com and corresponding Cotton benefits pages featuring Shop Cotton through search, social, display banners, and video advertising.

#### Current Status

- ▶ (Ongoing) Consistent site monitoring to update site efficiency, SEO optimizations, expanded content with shop. Additionally current platform, *The Fabric of Now*<sup>TM</sup> and Brand Partnership retailers are heavily featured and supported throughout the site.

### **Tactic: Advertising: Consumer Research**

Program Activity: Obtain metrics necessary to assess and re-engineer programs for maximum effectiveness.

## Current Status

- ▶ *The Fabric of Now*<sup>™</sup>: Developed survey-based research to mine insights, uncover ultimate tensions and ideal resolves for target to be featured in advertising. Tested language and insights with target to ensure maximum resonance in final assets.
- ▶ Long-standing Brand Tracker kept as-is for baseline assessment. Preliminary results indicate:
  - Love of cotton is higher among those who have previously seen the “Phone Free” or “Sleeping In” ads (64 percent of those who have previously seen an ad love cotton versus 51 percent who didn’t).
  - Label checking for fabric content is higher among those with ad recognition (70 percent who saw an ad from the TV campaign always/usually check labels versus 51 percent who didn’t).
  - The degree of influence fabric has on clothing purchase is also higher among those who have seen the campaign (60 percent versus 43 percent who didn’t).
- ▶ Upcoming: Update Brand Tracker for 2025 to align to updated audience and goals of reconsideration.

## **Tactic: Corporate Communications: Consumer Media Outreach (includes support of consumer programs, media relations and corporate social media activity)**

Program Activity: Support of Consumer Programs.

## Current Status

- ▶ Corporate Communications supported key consumer-facing projects in the first half of 2024, including the Blue Jeans Go Green<sup>™</sup> denim recycling program and ongoing support of advertising campaigns and initiatives.
- ▶ In support of the Blue Jeans Go Green<sup>™</sup> denim recycling program, the department consistently shared posts on the corporate-facing social media channels in support of the program and helped review press releases and material assets. In 2024, over 35 posts have been shared to the corporate social media channels about the program (as of mid-June), and the posts have garnered approximately 32,000 impressions to-date. Two articles in the Lifestyle Monitor<sup>™</sup> column have also been focused on promoting the Blue Jeans Go Green<sup>™</sup> program. These have been featured on the Lifestyle Monitor<sup>™</sup> Website and on *Sourcing Journal Online*.
- ▶ The Blue Jeans Go Green<sup>™</sup> program was also a focus in a press release sent out to honor the 151st birthday of the blue jean in May. The department also worked with brand partnerships in a thought leadership videos series about the program. These videos will be featured on the Lifestyle Monitor<sup>™</sup> website, used for pitching purposes, and on the corporate social media channels to highlight the program.

- ▶ In support of the retail programs, corporate communications worked closely with the brand partnerships team and the representatives of Lucky Brand to develop and pitch materials to promote the collaboration with the brand. They have also worked closely with the brand partnerships team and representatives at LoveShackFancy to develop promotional materials and press releases for the first-time collaboration between the companies.
- ▶ Corporate communications continues to assist in reviewing materials developed by brand partnerships and advertising for their campaigns and collaborations as part of the Razuna review process along with the legal department and the USDA.

#### Program Activity: Social Media.

##### Current Status

- ▶ Corporate: the department has focused on organically growing its social media presence (separate from the consumer-facing "Discover Cotton" pages). LinkedIn has become the most popular of the corporate social media channels, with 26,675 followers. The department also continues to publish on the Corporate "Cotton Incorporated" Facebook page (@CottonInc), and has significantly increased the quantity of posts to LinkedIn (@CottonIncorporated). The department also continues to be active on X (formerly known as Twitter) (@CottonInc). Across the channels, the department shares articles and information pertinent to the cotton, agricultural, and textile industries – press releases, webinars, environmental videos, etc.
- ▶ Engagement and followers have increased on the Corporate pages. The Corporate X (Twitter) page now has a total of 7,108 followers with over 33,600 impressions to date in 2024, while the Facebook page has a total of 13,808 followers with over 84,600 impressions. The LinkedIn page increased its followers by 11 percent over the same period as last year, and has garnered almost 200,000 impressions in the first half of 2024.
- ▶ The department has continued the increased promotion of the CottonWorks™ website and FABRICAST™ collections across social channels. The posts do particularly well on LinkedIn but also receive strong engagement across all the channels. The FABRICAST™ posts alone have garnered over 35,000 impressions alone across all three channels during the first half of 2024, with over 60 posts being shared. Additionally, 36 posts have been shared across the channels promoting the CottonWorks™ website, webinars, and workshops. These posts have garnered almost 31,000 impressions for the year.
- ▶ Popular posts across the channels include a focus on the Engineered Fiber Selection® (EFS®) in April, which was the top post on LinkedIn (~9,150 impressions); a spotlight on laundry and microplastics for World Laundry Day in April (~7,184 impressions on LinkedIn); and infographics about what a bale of cotton can make (~7,124 impressions on LinkedIn and ~4,551 impressions on Facebook).



## **Tactic: Corporate Communications: Trade Media Outreach (includes Lifestyle Monitor™ outreach)**

Program Activity: Create and distribute media communications and other materials that illustrate the advantages of cotton across all supply chain links. Participate in events and sponsorships that build demand and increase awareness for cotton among the trade industry.

### Current Status

- ▶ In the first half of 2024, Cotton Incorporated has continued working with *Sourcing Journal* for trade programs and branded content opportunities. Compared to all of 2023, page views for Cotton Incorporated content on the Sourcing Journal Website were up ten percent for the first quarter of 2024.
- ▶ Several earned trade media coverage as a result of the 2023 media familiarization tour and team follow up published during the first quarter. Coverage included a six-page feature spread in the March/April issue of *Textile World* highlighting company-wide activities with a large focus on sustainability research and progress as well as EFS® system and global supply chain programs. The *RIVET* Spring issue, published in April, and featured a story on the research behind recycling cotton into glucose and showcasing innovative circular vision of the company with its innovative cotton-to-sugar research and vision for how the textile industry could help alleviate textile waste. *Sourcing Journal* earned coverage in the first portion of the year included news stories about cotton's price surge with insight and analysis, as well as coverage on the sustainability summit in March and the Arts Threads design competition as well as a feature on the virtual showroom delivering design inspiration. These earned media activities provided additional trade outreach to 643,000 UVM (unique visitors monthly).
- ▶ This year, out of an increased interest in economics and cotton pricing, there was a continuation of the monthly column with *Sourcing Journal* to feature the Monthly Economic Letter published by Cotton Incorporated. To date, the featured economic letters have received over 25K page views on the *Sourcing Journal Online* Website, which is a 92 percent increase over this same time last year.
- ▶ In March, Cotton Incorporated participated as a sponsor of the Sourcing Journal's Annual Sustainability Summit. Staff held a prominent speaking opportunity during the one-day live/in-person conference in New York City in a panel discussion with *Sourcing Journal* called "The Natural Difference." The conversation detailed how natural fibers like cotton come out ahead due to their biodegradability and compostability, leading to a lower impact end of life. The panel also discussed how cotton lends itself to textile-to-textile recycling, as well as how Cotton Incorporated has developed a process that transforms cotton into glucose that can then become the building block for fuel, bio-based chemicals, and more. Approximately 250 guests attended the event in-person with almost 180 companies represented and 64 percent of the attendees being senior level executives. The overall program featured Cotton Incorporated's Seal of Cotton trademark on multiple e-blasts, digital ads, and networking opportunities during and throughout the conference. Two videos created by Cotton Incorporated were also shown at the event, with requests to learn more coming from companies after the event.

- ▶ Following the event, *Sourcing Journal* published the “2024 State of the Industry Sustainability Report,” with Cotton Incorporated as one of the sponsors. The report featured an editorial piece about cotton’s sustainability, as well as an ad provided by the Global Supply Chain Marketing department, driving traffic to the CottonWorks™ website.
- ▶ In early June, *Sourcing Journal* published the “2024 State of the Industry Material Innovations Report,” with Cotton Incorporated as one of the sponsors. This report also featured an ad provided by the Global Supply Chain Marketing department, driving traffic to the CottonWorks™ website.
- ▶ In addition to editorial and written content, we sponsored a fireside chat video with *Sourcing Journal* in January 2024 to showcase fabric inspiration and 3D design. In the video, staff was interviewed by *Sourcing Journal* to discuss digital design inspiration and Cotton Incorporated’s virtual showroom. In the first quarter, the branded content video piece received over 4.5K page views.
- ▶ Cotton Incorporated also continued to work with *The Robin Report* in the first half of 2024, featuring one article to date, which appeared in this well-respected, targeted trade publication, read for its insights in the decision-making world of C-suite executives. In 2024, we also continued updating digital banner ads on *The Robin Report* website to drive to the Lifestyle Monitor™ website to further bolster the promotion of the data featured in articles. In the first quarter, the banner ads garnered 17,670 total impressions.
- ▶ This year, the department continued to publish the Lifestyle Monitor™ column on a strategic bi-weekly basis. The department added content development for several long-form articles throughout the remainder of the year, creating in-depth pieces containing the Lifestyle Monitor™ data.
- ▶ The Lifestyle Monitor™ survey and other data resources continue to attract media and industry interest. Corporate Communications continues to work closely with CSI to promote all the analytical resources of the Company and to integrate these data to support the direction of the Company's cotton-promoting programs.
- ▶ The Lifestyle Monitor™ articles continue to remain a popular feature in the *Sourcing Journal* and in the denim-centric *RIVET* (as appropriate), where the articles are frequently the top reads of the week. To date, the articles in the column have received almost 62,000 page views on the *Sourcing Journal* website, a significant increase over the same time frame the year prior. Some of the most popular articles were about new retail technologies in the new year (6,319 page views), denim circularity (6,287 page views), consumer interest in natural fibers (6,208 page views), and what consumers are looking for in activewear (6,168 page views).
- ▶ Corporate Communications has also shared data and infographics about special surveys conducted by the CSI department. Special surveys included the Global Lifestyle Monitor™ (13 countries). These survey results are posted on the Lifestyle Monitor™ website.

- ▶ Custom social cards about Lifestyle Monitor™ data were created specifically for the corporate social media pages (Facebook, LinkedIn, and X/Twitter) about denim, sustainability, activewear, and home textiles. Including the custom social cards, a total of 103 social posts have been pushed out across the channels during the first half of 2024, linking directly to the Lifestyle Monitor™ Website. They garnered a total of over 66.7K impressions, an increase of over 15 percent over the same time period as last year.
- ▶ Earlier this year, the press section on the Lifestyle Monitor™ website was also updated. This Website page now includes all the Company’s press releases, an inquiry form, and more multimedia pieces for download for working press making information and media assets available for news opportunities (fact sheets, images, b-roll videos).

**Tactic: Corporate Communications: Sustainability**

Program Activity: Manage and develop content and prepare and disseminate materials via enhanced online and social media presence such as: webinars; explanatory videos on topical issues; etc. highlighting the range of cotton’s environmental strengths and other positive aspects of the industry.

Current Status

- ▶ The department continues to promote research about sustainability in the cotton industry. There has been increased promotion of the CottonToday website, with the department working most notably with the Sustainability department and other Cotton Incorporated staff to produce blog content to share new advancements and studies.
- ▶ The department has also worked closely with the Sustainability department over the beginning of 2024, along with H+K public relations agency to craft and publish meaningful, relevant content on the CottonToday website and across the corporate social media channels.
- ▶ As one way to amplify the CottonToday website and the sustainability of cotton, there has been an increased amount of information shared across corporate social media channels. In all, 57 posts directing to the CottonToday website have been shared across the channels, all containing timely and detailed information on certain topics. The posts have garnered over 68,100 impressions to date.
- ▶ A notable blog topic promoted this year was “Cotton Microfibers Biodegrade Similar or Faster than Tissue Paper Microfibers in Wastewater Treatment, Fresh Water and Saltwater Environments,” which was created to correspond with the panel discussion at the Sourcing Journal Sustainability Summit in March. The blog post details the research done by Cotton Incorporated and North Carolina State University investigating the biodegradation of cotton microfibers, wood pulp-based toilet tissue paper, flushable wipes, and polypropylene-based nonwoven wipes in various water environments.
- ▶ As there has become an increased interest in sustainability and cotton, the department has also incorporated the Company’s staff in other areas. Cotton Incorporated staff and speaking appearances at conferences have been promoted across social media channels, specifically on LinkedIn. The department is also looking at creating an

approved playbook for quick and informative responses on social media to reach the right audiences by Cotton Incorporated staff.

- ▶ Additionally, the department worked with the Sustainability department and H+K public relations agency to update the landing page of the CottonToday website. The change was implemented to help increase load time on the page as well as page views on other pages on the site.

### **Tactic: Corporate Communications: Increasing the Value of U.S. Cottonseed and Other Byproducts**

The department continues to conduct and manage marketing and promotion for both the whole cottonseed and cottonseed oil programs for 2024. The whole cottonseed program continues educational outreach to beef and dairy cattle ruminant nutritionists and producers by highlighting the fat, fiber, protein triple nutrient benefit messaging, and whole cottonseed's advantages over other feed ingredients.

Program Activity: Generate communications to support research that helps maintain/grow demand for whole cottonseed to dairy and beef producers and nutritionists. Participate in activities and events to reach key audience sets.

#### Current Status

- ▶ For whole cottonseed, the “Dear Nutritionist” dairy campaign creative has continued after launching in 2022 and creative being updated in 2023.
- ▶ A new beef campaign “All Hat, All Cattle” launched in early 2024. Print and digital ads have been targeting trade audiences to keep whole cottonseed top of mind during and throughout the season as a premium feed option.
- ▶ In the paid search campaigns, the dairy campaign garnered 3,734 impressions and the new beef campaign garnered 11,792 impressions.
- ▶ Pre-roll for the campaigns was also part of the digital strategy for whole cottonseed, garnering over 446,000 impressions and over 225,000 views in the first quarter.
- ▶ For the whole cottonseed website, 29K new users visited the website in the first quarter, with display ads accounting for 21K as the top driver for traffic to the site.
- ▶ For whole cottonseed, there were also approximately 102,500 estimated earned media impressions from media placements in the *Angus Beef Bulletin*, *Farm Talk*, and *Feedlot Magazine*.
- ▶ Whole Cottonseed sponsored the Tri-State Nutrition Conference, reaching 372 attendees with key messaging and information about whole cottonseed's benefits.
- ▶ The WholeCottonSeed.com website received an update to the Marketplace section with the addition of a price ticker auto-updated for buyers to have the current pricing on whole cottonseed available on the site when they are looking for a supplier. This addition

creates real-time pricing and a user-friendly experience when considering whole cottonseed for the ration.

Program Activity: Work with stakeholders to reintroduce value of cottonseed oil to appropriate market categories.

#### Current Status

- ▶ The three Advisory Councils have continued to hold meetings, with the oil advisory council being in its first full year.
- ▶ Presentations on sustainability and health research/benefits have already been conducted with a total of two meetings, one each quarter with subject matter experts.
- ▶ These meetings/discussions are helping to keep a pulse on the industry challenges and opportunities. Content ideas for publishing in materials are being developed for the remainder of 2024.
- ▶ Staff attended the Culinary Institute of America conference, Menus of Change, in June with outreach to over 200 foodservice professionals, attended seminars on sustainability in the food space and shared key points with industry introductions and meetings throughout the conference.
- ▶ A sustainability positioning statement and messaging was developed and shared with the oil sector to utilize for advantages of using cottonseed oil to help lower carbon footprint within the foodservice industry and others.

Program Activity: Leverage direct research and halo effect of other cotton advancements to promote cottonseed benefits to key audiences (cattle producers and nutritionists).

#### Current Status

- ▶ Corporate Communications is working with AERD to make research open-sourced for easy access and amplification. A new study about the effect of increasing dietary inclusion of whole cottonseed in dairy cattle was made open access from the *Journal of Dairy Science*. This research will be amplified as content on the whole cottonseed website.

### **Tactic: Brand Partnerships: Strategic & Retail Partnerships**

Program Activity: Develop retail and brand partnerships for cotton at point-of-sale. Align with national and specialty chain retail partners as well as influencers, designers, and brands to encourage consumers to purchase cotton. The department employs an integrated marketing approach designed to ease the consumer journey to easily find and shop cotton online and in-store. Key objectives for retail programs include driving sales, creating awareness for cotton, and promoting key cotton benefit messages and the Seal of Cotton trademark.

## Current Status

### ▶ Lucky Brand

- From May 15 to July 11, customers can find their favorite summers styles in their favorite fabric online and in-store at Lucky Brand.
- The Cotton Shop at Lucky Brand has its own custom landing page featuring the Seal of Cotton trademark on all 200+ women's and men's SKUs.
- Lucky Brand featured The Cotton Shop at the forefront of the site's homepage for two weeks.
- Lucky Brand is promoting The Cotton Shop with dedicated images going out to its 2M+ email subscribers, as well as multiple collaborative social media posts and stories.
- One hundred forty-three (143) Lucky Brand stores are currently featuring custom mirror signage in fitting rooms, in-store rolling rack signage, and window displays including branding and mannequins dressed in full cotton-rich looks.
- A robust paid media plan with iHeart Radio will leverage its podcast network to support The Cotton Shop with a combination of pre-roll, midroll, post-roll, and podcast advertisements. There is also a paid social campaign with Meta currently underway.
- Thirteen (13) influencers were onboarded to promote The Cotton Shop at Lucky Brand in head-to-toe cotton looks on their Instagram and/or TikTok.

### ▶ REVOLVE (FWRD & RMAN)+

- The Cotton Shop is at REVOLVE, men's e-tailer REVOLVEman and luxury e-tailer FWRD, showing it has become a shopping experience cornerstone for the on-trend e-commerce site(s).
- From April 29 to October 31, over 8,000 cotton-rich SKUs will be available to purchase across the three sites.
- REVOLVE will continue to tap into their one-of-a-kind talent network to secure influencer content from 20 influencers, five of which will have a curated cotton shop featured on the site.
- REVOLVE continues to promote The Cotton Shop on their owned social channels (collectively amassing over 8.5 million followers) with monthly creative refreshes to show the newest cotton styles.
- REVOLVE and Cotton will be opening a pop-up shop in Dallas, Texas, that will be available to the public later this fall. The shopping event will feature branded Seal of

Cotton trademark placement, including product hangtags on the 80+ cotton-rich SKUs. Various influencers and VIP guests will be invited to the launch of the shop wearing head-to-toe looks from The Cotton Shop.

#### ▶ LoveShackFancy

- The Brand Partnerships team is ecstatic to be working with newly onboarded retail partner, American fashion, home and lifestyle brand, LoveShackFancy. On July 25, Cotton x LoveShackFancy released The Americana Cotton Collection, starring gymnastics champion, Suni Lee, ahead of Suni's potential participation in the 2024 Olympic Games.
- Promotional assets feature an array of gorgeous pieces from the collection worn by Suni doing gymnastics tricks combined with program messaging and the Seal of Cotton trademark. The Seal of Cotton trademark is also proudly branded on each product description page of all participating styles.
- Now through August 8, customers can shop The Cotton Collection, featuring 200+ cotton-rich SKUs ranging from ready-to-wear, girls' apparel, accessories and home goods, online and in-store at LoveShackFancy.
- LoveShackFancy is promoting The Cotton Collection on their owned social channels (collectively amassing over 1M followers), weekly newsletters to their 500,000+ email subscribers, and weekly SMS messages (70,000+ subscribers).
- Suni is also promoting the Americana collection to her 2M+ IG followers.
- All U.S. LoveShackFancy locations will feature window signage, in-store signage and a merchandised section featuring pieces from the collection. Select stores will celebrate the launch of the Americana collection with music, a lemonade stand, a cotton candy cart, and custom embroidery on Saturday, June 29.

#### **Tactic: Brand Partnerships: Consumer Sustainability Initiative (Blue Jeans Go Green™ Denim Recycling Program)**

Program Activity: Continue to strengthen and amplify the message of cotton circularity through focusing on the short term and long-term benefits of buying, wearing, and recycling denim.

##### Current Status

#### ▶ Retail Involvement

- Retail involvement started out strong in 2024 with continued participation from brands including Anthropologie, Ariat, American Eagle Outfitters, Carhartt, Frank & Oak, Hemline, Madewell, MUJI, Paige, rag & bone, Wilco, and Zappos.
- With support from the Advertising team, the Hemline program utilized a paid social media campaign to spread awareness and promote engagement within their second year of participation with BJGG.

- The paid social campaign resulted in nearly 2.5M impressions.

#### ▶ CSR/Community Involvement

- BJGG utilized a social tactic known as Like, Follow, Tag to encourage Instagram followers to share a topline overview of the Blue Jeans Go Green™ program with their friends, family, and/or followers while highlighting Earth Day. To support this tactic, BJGG partnered with a sustainability-focused influencer to educate her audience and give away a \$422 gift card (in honor of Earth Day) to the BJGG retailer of choice for each of the five sweepstakes winners.
- BJGG received the most follows (71) in a single day on April 19, when the sweepstakes giveaway went live, and saw little drop off in the weeks after indicating they are interested in continuing to engage with BJGG program messaging.

#### ▶ Earth Day Seasonal Promotion

- In addition to the Like, Follow, Tag sweepstakes giveaway, the same sustainability-focused influencer, Charli Andrea, created a series of three (3) IG reels to educate her followers on the importance of cotton sustainability and the Blue Jeans Go Green™ program.
- In total, BJGG received 211 new followers, 418K impressions and a 10.9 percent engagement rate (ER) during the Earth Day campaign flight (brands on IG typically receive 0.67 ER, with nonprofits seeing 1.05 percent ER).
- On Earth Day, BJGG also worked with influencer Nicole Knox to spread BJGG's message on cotton sustainability to her audience. This reached 60,117 users with an engagement rate of 4.7 percent.
- The Blue Jeans Go Green™ program continued to highlight the importance of Earth Day in 2024, with an impactful series on social showing how many pieces of recycled denim are needed to wrap the world in a hug. This series showed various landmarks around the world, and the number of pairs of denim needed to wrap around that landmark.
- This content led three thousand new visitors to the BJGG website during the campaign flight April 14-22.

#### ▶ End-Product Activity – Insulating Material

- BJGG is working with a brand to complete ped beds made with STORM COTTON™ technology that utilize insulation liners made from recycled denim manufactured by Bonded Logic, Inc.



- BJGG distributed building insulation to the Iowa Heartland Habitat for Humanity and the Fuller Center for Housing (a nonprofit organization that builds and repairs homes for people in need) in New York.

▶ Denim Collection Impact

- As a result of all program participants efforts, over 175K pieces of denim have been contributed for recycling during the first six months of 2024. Additionally, 1,180+ pieces of recycled denim insulation liners have been returned during the same time period.

**Tactic: CSI: Market Intelligence**

Program Activity: Retail Monitor™ research - used to provide insights into cotton’s presence at retail and the opportunities and challenges for cotton in major adult and children’s apparel categories in the U.S.

Current Status

- ▶ For the first half of 2024, staff has collected details on over six million clothing items from more than 100 retailers across the U.S. Data will be used to analyze fiber presence by category and provide pricing and product distribution at retail.

Program Activity: Lifestyle Monitor™ survey - used to understand the attitudes of U.S. consumers toward cotton and competitive fibers, denim jeans, back-to-school shopping, and awareness of microfiber pollution along with other topics.

Current Status

- ▶ In the first half of 2024, three thousand shoppers were surveyed about their back-to-school shopping plans, preferences for natural fibers, and the importance of quality in their clothing along with other topics. The research has been used in presentations and provided to Corporate Communications for use in articles and interviews.

Program Activity: Economic analysis - tracks and analyzes the constantly evolving market for cotton, by daily updates to cotton fundamentals including world prices, global production, and demand for cotton as well as other factors that impact the cotton market, including governmental regulations, weather patterns, and the influence of prices for competitive fibers.

Current Status

- ▶ Census-Based Import Database maintains a comprehensive database of U.S. textile imports by source country. This database is used to support the analysis of sourcing patterns such as the ban on Xinjiang-grown cotton, changes in import volumes after COVID, and changes in sourcing costs after the increases in cotton prices.
- ▶ End-Use Consumption – While multiple estimates for global mill-use (transformation from fiber into yarn or non-wovens) exist, there are few estimates for end-use by consumers, and the source that exists shows wide discrepancies. To better understand trends in end-use, staff has compiled a large database of trade statistics for a wide range of

countries. The objective of this study is to construct a set of figures that can be considered a representation of consumer demand.

### **Tactic: CSI: Corporate Dissemination**

Program Activity: Produce and disseminate analysis of market information to assist and influence current and future cotton users in the global supply chain.

#### Current Status

- ▶ Staff presented to more than 1.4K attendees during 37 economic and market research presentations at global conferences, one-on-one meetings, and webinars.
- ▶ Over 50 publications were produced and distributed via email and posted on Cotton Incorporated websites including the Monthly Economic Letter, Executive Cotton Update, Weekly Export Sales, Pass Through Supply Chain reports, and Supply Chain Insights on Consumer Closets, Sustainability, and the Global Lifestyle Monitor.

Program Activity: Assist Cotton Council International (CCI) with global intelligence collection, analysis, and dissemination.

#### Current Status

- ▶ Provide CCI with monthly retail sales and trend updates.
- ▶ Provided a sustainability and circularity presentation at CCI's Sustainability seminar in Bangladesh.
- ▶ Currently conducting an online shopping survey in Mexico, the U.K., France, Germany, and Italy to assess what types of clothing shoppers are buying online.
- ▶ Contamination research conducted among mills and manufacturers as a follow-up survey to CCI's Mill and Manufacturer benchmark study. A total of 41 respondents provided information on the contamination found in cotton purchases. The research is being analyzed along with a sample from the 2021 survey.

### **Tactic: CSI: Strategic Research and Program Metrics**

Program Activity: Conduct strategic research to further corporate efforts.

#### Current Status

- ▶ New Year's Survey - conducted among three thousand consumers in the U.S., China, and Mexico to understand shoppers' outlooks for the new year and clothing purchase intentions.
- ▶ Inflation and Supply Chain Survey – conducted among three thousand consumers in the U.S., China, and Mexico for a temperature check on concern over inflation and how it may impact clothing purchases for the year.
- ▶ Baby Care Survey – conducted among 4.5K parents in the U.S., Mexico, Brazil, China, France, Germany, South Korea, the UK, and Turkey to assess parent's preferences and shopping behavior for baby diapers and wipes.

- ▶ Fiber Content Labeling Survey – conducted among five thousand consumers in the U.S., Mexico, China, France, Germany, Italy, and the UK to understand what shoppers use on the clothing labels and how often they read them before buying clothes.
- ▶ Sizing Survey – conducted among three thousand consumers in the U.S., Mexico, and China to assess experiences with mass and plus sizing of clothing and problem areas for tops and bottoms.
- ▶ Back-to-School Supplemental Survey – two surveys conducted among 500 parents and 500 students to gain insights into purchase behaviors and intentions for the upcoming school year.
- ▶ De minimis research and analysis – analyzing available data to assess the amount of clothing and home textiles being purchased online and imported using the de minimis tax rule.

Program Activity: Evaluate Cotton Incorporated program activities.

#### Current Status

- ▶ Brand Tacker – For the first half of 2024, a total of 2.8K U.S. respondents were interviewed regarding their awareness and attitudes toward cotton and competitive fibers and to track awareness, likeability, and effectiveness of video content from advertising. The research provides insight into changing emotions toward fibers and shows that promotions are meeting objectives by maintaining cotton’s significant lead in fiber awareness and emotional connection.

## APPENDIX A: MEDIA OUTREACH COVERAGE

Generating press releases about noteworthy activities and accomplishments, as well as sharing information with the media, remains an extremely successful means of securing press coverage. These proactive and reactive communications draw upon the knowledge of in-house experts and the full range of data and analyses generated by the Company. The following communications were disseminated to date in 2024.

### Trade

“Aspire to Inspire: Cotton Incorporated Continues its Commitment to Student Innovation with Digital Fashion”	Sent to targeted pitch list
“Cotton Research and Promotion Program Hall of Fame 2023 Inductees Honored”	Sent to local targeted pitch list
“Study Reveals that Cotton Microfibers Biodegrade Faster Than Tissue Paper Microfibers In Wastewater Treatment, Fresh Water and Saltwater Environments”	Sent to targeted pitch list
“Lucky Brand and Cotton Incorporated Unveil Second Collaboration”	Sent to targeted pitch lists for both trade and consumer-focused media
“New Research: Synthetic Clothing Generates Plastic Pollution Equivalent to the Weight of 820 Eiffel Towers Annually”	Sent via targeted pitch

### Consumer

“Cotton Incorporated Celebrates the Benefits of Authentic Cotton Denim for 151 <sup>st</sup> Birthday of Blue Jeans”	Sent via wire distribution and targeted pitch list
“Cotton and LoveShackFancy Unveil ‘Americana’ Capsule Collection in Collaboration with Gymnastics Champion Suni Lee”	Sent via wire distribution and targeted pitch list

### Print Coverage

The following is a list of some of Cotton Incorporated's print coverage in the first two quarters of 2024.

<i>Charleston Gazette-Mail (West Virginia)</i>	Mention of Cotton Incorporated
<i>RIVET (Spring 2024)</i>	Mention of Cotton Incorporated
<i>Home Accents Today</i>	Mention of Cotton Incorporated & the Blue Jeans Go Green™ program
<i>The Free Press</i>	Mention of Cotton Incorporated
<i>Agriculture Daily</i>	Mention of Cotton Incorporated
<i>Textile World</i>	March / April feature story - 6-page spread on company-wide activities
<i>RIVET</i>	Spring issue (April) feature story on cotton-to-sugar research
<i>Sourcing Journal</i>	Sustainability April feature story - Researching and Reducing Cotton's End of Life Impact

<i>Knitting Trade Journal</i>	Feature story on knitted upper in footwear innovations
<i>Sourcing Journal</i>	3D design competition - Arts Threads - February story
<i>Sourcing Journal</i>	Cotton's price surge - insights from Jon Devine (February)
<i>Sourcing Journal</i>	3D design Virtual Showroom feature story (January)

### Television and Radio Coverage

The following is a partial list of Cotton Incorporated's television and radio coverage in the first two quarters of 2024.

Station	Affiliate	Market	Topic
WHNT		Huntsville, AL	Interview with Melissa Bastos; coverage of LM data
WTVC		Chattanooga, TN	Interview with Melissa Bastos; coverage of LM data
WMPW-FM		Danville, VA	Mention of Cotton Incorporated
WICZ-TV		Vestal, NY	Mention of Cotton Incorporated & CottonToday
WLUS-FM		Clarksville, VA	Mention of Cotton Incorporated & the Blue Jeans Go Green™ program
KSID-FM		Sidney, NE	Mention of Cotton Incorporated & the Blue Jeans Go Green™ program
KFOL-TV		Houma, LA	Mention of Cotton Incorporated & the Blue Jeans Go Green™ program

### Internet Coverage

The following is a partial list of the online mentions of Cotton Incorporated, or its initiatives or programs, in the first two quarters of 2024.

<i>Cotton Grower</i>	Mentions of Cotton Incorporated & the Blue Jeans Go Green™ program
<i>Little House Living</i>	Mention of the Blue Jeans Go Green™ program
<i>Fibre2fashion</i>	Mention of Cotton Incorporated
<i>Oklahoma Farm Report</i>	Mention of Cotton Incorporated
<i>Farm Talk Newspaper</i>	Mention of Cotton Incorporated & whole cottonseed
<i>Yahoo Life</i>	Mention of Cotton Incorporated & monthly economic letter
<i>Apparel Views</i>	Mention of Cotton Incorporated & <i>Lifestyle Monitor</i> ™ data
<i>Cotton Farming</i>	Mentions of Cotton Incorporated
<i>Beef Magazine</i>	Mention of Cotton Incorporated & whole cottonseed
<i>Canadian Insider</i>	Mention of the Blue Jeans Go Green™ program
<i>The Selma Times Journal</i>	Mention of the Blue Jeans Go Green™ program
<i>Rivet</i>	Mentions of Cotton Incorporated & the Blue Jeans Go Green™ program
<i>Gulf &amp; Main Magazine</i>	Mention of the Blue Jeans Go Green™ program
<i>Canadian Insider</i>	Mention of the Blue Jeans Go Green™ program
<i>Southwest Daily News</i>	Mention of the Blue Jeans Go Green™ program
<i>Textile World</i>	Mentions of Cotton Incorporated & the Blue Jeans Go Green™ program

<i>Agri Life Today</i>	Mention of Cotton Incorporated
<i>ELLE</i>	Coverage of LoveShackFancy collaboration
<i>Feedstuffs</i>	Mention of Cotton Incorporated & whole cottonseed
<i>TexIntel</i>	Mentions of Cotton Incorporated
<i>Milling Journal</i>	Mention of Cotton Incorporated
<i>Nonwovens Market</i>	Mention of Cotton Incorporated
<i>Washington Association of Wheat Growers Magazine</i>	Mention of Cotton Incorporated
<i>Living Magazine</i>	Mention of the Blue Jeans Go Green™ program
<i>Refinery29</i>	Coverage of LoveShackFancy collaboration
<i>International Fibers Journal</i>	Mention of Cotton Incorporated
<i>Consumer Goods Technology</i>	Mention of Cotton Incorporated
<i>Seed Today</i>	Mention of Cotton Incorporated
<i>Designers Today</i>	Mention of Cotton Incorporated
<i>Home Textiles Today</i>	Mention of Cotton Incorporated
<i>Textile World Asia</i>	Mention of Cotton Incorporated
<i>Furniture Today</i>	Mention of Cotton Incorporated
<i>Sustainable Jungle</i>	Mention of the Blue Jeans Go Green™ program
<i>Farm Talk Newspaper</i>	Mention of Cotton Incorporated
<i>High Plains Journal</i>	Mention of Cotton Incorporated
<i>Medium</i>	Mention of Cotton Incorporated
<i>The Times and Democrat</i>	Mention of Cotton Incorporated
<i>Farm Press</i>	Mention of Cotton Incorporated
<i>Southern Sports Today</i>	Mention of Cotton Incorporated
<i>The Interline</i>	Mention of Cotton Incorporated & CottonWorks
<i>LA Progressive</i>	Mention of Cotton Incorporated
<i>Mexico Business News</i>	Mention of Cotton Incorporated
<i>L'Observateur</i>	Mention of Cotton Incorporated
<i>Trend Hunter</i>	Mention of the Blue Jeans Go Green™ program
<i>Columbia Business Monthly</i>	Mention of Cotton Incorporated

# Consumer Marketing

## Advertising, Corporate Communications, Brand Partnerships, and Corporate Strategy & Insights

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### Explanations of terms and activities

- ▶ **Brand Lift Study (BLS):** Brand Lift Studies are a way of measuring campaign effectiveness through questions directly to the consumer to gauge how effective the creative is at driving ad recall, brand lift, awareness, preference, and/or consideration.
- ▶ **Chinese Consumer Survey:** The Chinese Consumer Survey is an ongoing consumer survey in China that has been conducted quarterly since the third quarter of 2009 and is conducted jointly with Cotton Council International (CCI). Each year, the survey interviews 4,000 Chinese consumers between the ages of 15-54 who are primary shoppers for clothing in over 20 provinces and over 40 cities through random doorstep, face-to-face interviews. Results from the survey are representative of the urban Chinese clothing shopping population. The data are used both internally and externally for publications, presentations, and for strategic direction.
- ▶ **Click-Through Rate (CTR):** CTR is a way of measuring the success of an online advertising campaign for a particular Website. The click-through rate of an advertisement is defined as the number of clicks on an ad divided by the number of times the ad is shown (impressions), expressed as a percentage. For example, if a banner ad is delivered 100 times (100 impressions) and receives one click, then the click-through rate for the advertisement would be 1%.
- ▶ **Corporate Social Responsibility (CSR):** CSR is a business model that helps a company be socially accountable to itself, its stakeholders, and the public.
- ▶ **Cost per Thousand Impressions (CPM):** CPM is a phrase used in online advertising for measuring the worth and cost of a specific campaign. The CPM model refers to advertising bought on the basis of impression. The total price paid in a CPM deal is calculated by multiplying the CPM rate by the number of CPM units. For example, one million impressions at \$10 CPM equals a \$10,000 total price.
- ▶ **Cost per Link Click (CPLC):** CPC shows how much, on average, each link click costs you. The metric is calculated as the total amount spent divided by link clicks.
- ▶ **Executive Cotton Update:** The *Executive Cotton Update* is focused on the U.S. economy and is designed as a tool to inform clients about how changes in the U.S. economy might affect the cotton supply chain. Retail sales, clothing store inventories, consumer confidence, and spending, and U.S. import data are among the many statistics that are followed in this report.
- ▶ **Gross Rating Point (GRP):** GRP is a term used in advertising to measure the size of an audience reached by a specific media vehicle or schedule. It is the product of the percentage of the target audience reached by an advertisement, times the frequency they see it in a given campaign. For example, a TV advertisement that is aired five times reaching 50% of the target

audience would have 250 (GRP = 5 x 50% --) i.e., GRPs = frequency x % reach. To determine a total GRP, individual ratings for each media vehicle are added together.

- ▶ **Key Performance Indicators (KPI):** KPI are metrics used by decision-makers to track and evaluate the effectiveness of a campaign against established business goals and objectives.
- ▶ **Lifestyle Monitor™ Survey:** The Cotton Incorporated *Lifestyle Monitor™* survey is an ongoing consumer survey that has tracked consumers' product and fiber preferences and shopping habits since 1994. Recent surveys allow for the inclusion of additional questions to analyze specific product-related questions or timely issues such as the economy or holiday spending plans. The data are used both internally and externally for publications, presentations, and for strategic direction.
- ▶ **Monthly Economic Letter:** Cotton Incorporated's *Monthly Economic Letter* is a regular publication that is released following USDA updates to their supply and demand estimates. This publication is designed to inform participants in the cotton supply chain about developments in the cotton market in order to help them make better and more profitable decisions.
- ▶ **Reach:** The number of users (measured by number of user accounts) that saw your ads at least once.
- ▶ **Retail Monitor™ Survey:** The Cotton Incorporated *Retail Monitor™* survey is a quarterly retail audit of apparel products at 25 major U.S. retailers, in-store and online. The data are used both internally and externally for publications, presentations, and for strategic direction.
- ▶ **Search Engine Optimization (SEO):** Search engine optimization is a methodology of strategies, techniques, and tactics used to increase the amount of visitors to a Website by obtaining a high-ranking placement in the search results page of a search engine – including Google, Bing, Yahoo, and other search engines.
- ▶ **Supply Chain Insights:** Supply Chain Insights is a publication focused on topics of current interest throughout the cotton supply chain, from fiber production to trade, sourcing and manufacturing, to retail and the consumer. This print publication has also been adapted to include digital video formats as a novel way to engage online audiences.
- ▶ **Video View Rate (VVR):** A ratio showing the number of paid views of a video ad to the number of impressions. View rate is similar to click-through rate (CTR), but instead of measuring clicks, it counts people who viewed your video ad after seeing it on YouTube or the Display Network.





## **Corporate Administration**

Mid-Year 2024

### **Corporate Administration**

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The Corporate Administration Division includes Board of Director Services, Human Resources, Corporate Office and Facility Services, and Legal Departments.

The Corporate Finance Division is comprised of the Accounting and Treasury & Investment Services Departments.

The Board held an Executive Committee Meeting February 26-28, in Savannah, GA, in conjunction with the Cotton Board's meeting. The Cotton Incorporated Executive Committee participated in many of the Cotton Board sessions, including Program Committee meetings, the General Session, and the Business Session.

The Officers of Cotton Incorporated and the Cotton Board held a Joint Board Strategic Planning Session April 8-9. Topics of discussion included 2024 budget execution, the Cotton Board's Program Recommendations for 2025, medium-term funding, longer-term funding, personnel, and key programmatic directions.

In addition, the Cotton Incorporated Board of Directors held a Directors Meeting June 9-11, in Dallas, TX, in conjunction with Cotton Board Members. The key objectives of the meeting were for management, staff, and Board Officers to:

- ▶ Provide Updates on 2024 Program Activities
- ▶ Present 2025 Budget Framework for Discussion and Board Recommendation
- ▶ Presentation of 2023 Actual-to-Budget Report
- ▶ Provide a Response to the Cotton Board's Program Recommendations

COTTON INCORPORATED  
BUDGET DATA THROUGH JUNE 30, 2024

<u>Program Area</u>	<u>Budget</u>	<u>Actual</u>
<hr/>		
<u>Agricultural Research</u>		\$ 16,699,000    \$ 3,052,000
<u>Research &amp; Development</u>		
➤ Fiber		
Competition	\$ 4,795,000	\$ 2,058,000
➤ Product Development & Implementation	\$ 4,659,000	\$ 9,845,000
	<hr/>	<hr/>
	<b>\$ 14,640,000</b>	<b>\$ 6,717,000</b>
<u>Global Supply Chain Marketing</u>		\$ 17,823,000    \$ 8,820,000
<u>Consumer Marketing</u>		\$ 33,466,000    \$ 14,490,000
<u>Corporate Administration</u>		\$ 5,930,000    \$ 3,132,000
<b>TOTAL:</b>		<hr/> <b>\$ 88,558,000    \$ 36,211,000</b>