



Cotton
Incorporated

Request for Proposals 2025

Product Development and Implementation Division

Objective

The Product Development and Implementation division at Cotton Incorporated seeks research proposals on the following subjects. Cotton Incorporated's main goal is to promote the consumption of cotton among consumers. Therefore, our main focus is on applied research where the results can be quickly implemented into production.

The topics of interest are as follows:

1. Cotton Incorporated has developed a method to take cotton textile waste back to its glucose building blocks. The proposed project will use the glucose obtained from this cotton-to-sugar project (managed by Cotton Incorporated) as an intermediary chemical to formulate a viable new product. Also, the economics involved in developing the new product must be generated.
2. Develop a new bio-based chemistry sourced from by-products of cotton plants as an auxiliary, a dye, or a finish for treating cotton and cotton-rich substrates.
3. Propose the latest development that highlights waterless preparation and dyeing for cotton and cotton blends. This project will include developing prepared or dyed fabric samples using the highlighted new technology along with data comparing the newly processed sample against a conventionally processed sample.
4. To analyze and modify conventional pretreatments, finishes, or processes for cotton that will help lower the carbon footprint of the substrate. The recommended modifications will be implemented, and results recorded to compare the modified treatment or process to conventional methods to support the claim for a lower carbon footprint.
5. Develop an elastane-free 100% cotton knit fabric with good stretch and recovery in the construction. This project will involve developing the fabric and supporting the stretch and recovery of the fabric with data.
6. Develop a case study for a non-apparel product that addresses the circular economy for cotton textiles.
7. Develop a new application for cotton substrate in 4D printing.
8. Collect detailed data on thermal property-related measurements for the newly constructed woven, knit, and quilt fabrics (developed by Cotton Incorporated). The data collected in this short-term project should result in a publication.

9. Develop a new non-apparel composite product from mechanically recycled cotton that is scalable into a commercial commodity. The new product will have practical applications in real-life scenarios such as architecture, furniture components, automotive, etc.
10. Develop a novel nonwoven product from post-consumer cotton textile waste. Product application can be in areas such as pads for oil absorbent, padding for sports equipment, cost-effective blankets/mattresses for emergency shelters, biodegradable, moisture-retaining planter sleeves, burlap replacement wraps for the root ball of trees/bushes, and other plant nursery end uses.
11. Develop an innovative cotton textile product or processes involving yarn or fabric in either manufacturing, processing, or finishing. This developed product should be based on emerging sustainable technology.

Preference will be given to projects that are **smaller in scope** and can demonstrate **initial results in 6-12 months**, with the option of being continued if results show promise. All projects must be completed by the end of 2025.

Background

The mission of Cotton Incorporated is to increase the demand for and profitability of cotton. Proposals with good commercial potential to impact the market are typically given priority. Applicants are encouraged to visit our company website for additional information about Cotton Incorporated: www.cottoninc.com

Pre-Proposals

Applicants are strongly encouraged to submit a pre-proposal before spending their time writing a full proposal. The pre-proposal can be as simple as an email that explains in a few paragraphs the basic concept, the approach of the research, and the *estimated amount of funding needed* to run the project. Providing this information will allow us to work together to define targeted objectives that are mutually agreeable before a complete proposal is written. The exact topics to which the proposals will be submitted must be identified in the submission. Please limit the number of pre-proposals submitted to less than four per person. Once the pre-proposal gets approved, applicants will then be asked to submit a full proposal. A sufficient amount of time will be provided

to complete the full proposal. Pre-proposals in electronic format are due by **Sunday, June 30th, 2024**. Also, please note that pre-proposals sent after the due date will not be considered.

Pre-Proposal Submission

Please submit pre-proposals in electronic format by **Sunday, June 30th, 2024**. Full proposals will only be requested for specific projects that meet our criteria. Please submit your pre-proposals to:

Mary Ann Ankeny

Vice President, PDI Operations

Textile Chemistry Research, Cotton Incorporated

919.678.2394

TCR-Proposals@cottoninc.com