COTTON MICROFIBERS MAKE A BIG DIFFERENCE.

COTTON USA is committed to growing and producing cotton sustainably, striving to create minimal environmental impact before, during and after manufacturing. As industry concern over microplastics in our ocean grows, a new study proves cotton microfibers are the most environmentally-friendly.

THE PROBLEM WITH PLASTICS

The production of synthetic fibers for textiles has rapidly increased in the past decade. Synthetic fibers can create small plastic particles called microplastics that end up in our waterways. It's estimated that 270,000 tons of microplastics exist in the world's oceans. They can also be found in our air, food and drinking water.

- Of 159 global tap water samples, 81% contained synthetic microplastics
- 12 U.S. beer brands sampled, all contained microplastics
- 12 sea salt brands sampled, all contained microplastics
- The average person ingests 5,800 particles of synthetic debris annually

THE PROBLEM WITH LAUNDRY

Every time you wash an article of clothing, thousands of microfibers are shed from the textile and released into the waste water. All textiles produce microfibers, but synthetic textiles are the ones producing microplastics. Water treatment facilities are able to filter out some microfibers and microplastics, but the rest continue through to streams and rivers, and eventually the ocean. And with the average U.S. household doing 8-10 loads of laundry a week, microplastics will continue to rise.

LAUNDRY IN THE LAB: AN INDEPENDENT STUDY

A recent independent study from North Carolina State's College of Natural Resources set out to better understand what happens to small particles of cotton, polyester, rayon and poly/cotton blends that are released into our water. The team simulated the laundering process for all four fabric types in a controlled environment. Cotton generated the most fibers during both washing and drying while rayon produced the least.

But more than just discovering how many microfibers were produced, researchers wanted to understand to what extent microfibers and microplastics remained in water and what their eventual fate might be. Fibers were tested in different water types to measure the biodegradation process.

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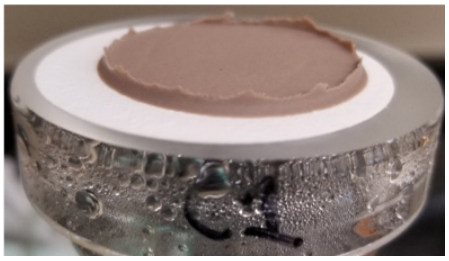
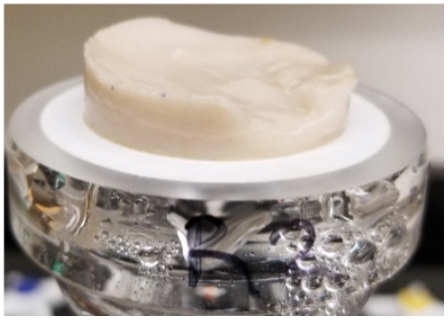
LAB SAMPLES SHOW HOW DIFFERENT FIBERS BIODEGRADE:



COTTON



RAYON

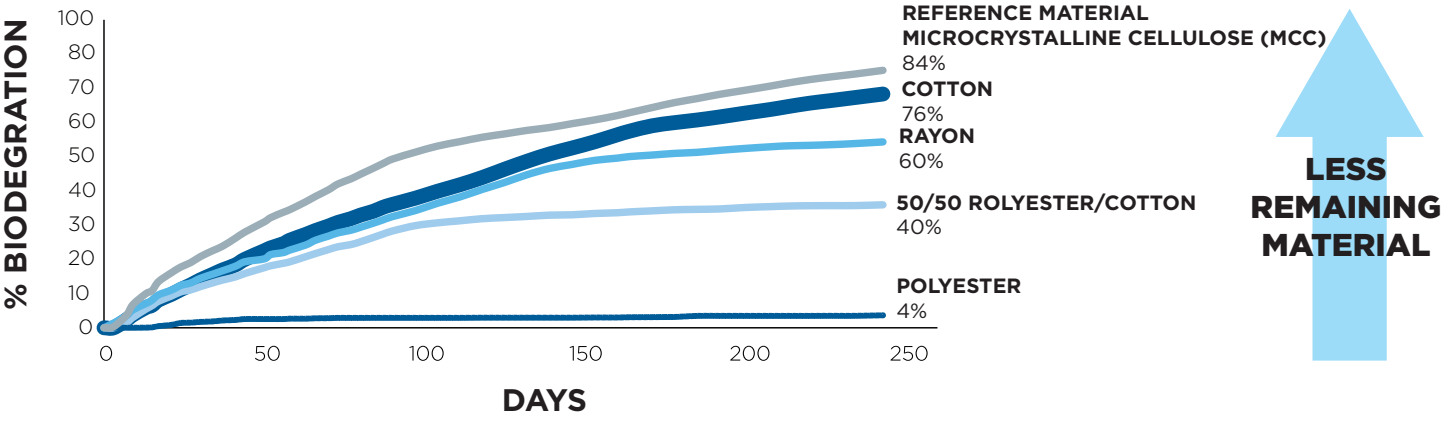
POLYESTER

THE RESULTS: COTTON BIODEGRADES. POLYESTER DOESN'T.

The study found cotton microfibers to be the most biocompatible, or environmentally-friendly, when compared with rayon, polyester and blended fabrics. Although cotton releases more microfibers than other textiles, the natural fibers degrade the most during the treatment process and in natural aquatic environments. In eight months, cotton fibers released in the wash degraded by 76% and were continuing to degrade.

On the other hand, polyester degraded only 6% in the same amount of time and had seemingly stopped the degradation process. This makes cotton fibers 95% more biodegradable than polyester.

Rayon products and blends fell somewhere in between.



LIGHTENING THE LOAD

As one the of the main contributors to the microfiber problem, textile manufacturers need to make environmentally-conscious decisions to minimize their impact. COTTON USA can help. U.S. cotton is a strong and natural fiber. It's grown according to the highest sustainability standard and biodegrades quickly. From the start of its life cycle to the finish, cotton is the better choice for the environment and your business.

Key questions for mills, manufacturers, retailers and consumers to consider surrounding microfibers:

- How can we produce clothes that are biocompatible from birth to disposal?
- Can we make different purchasing choices to protect the environment?
- Can we recycle or find other productive ways to use discarded clothes?