

Presenter was not present at meeting

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TITLE: Friction Measurements on Cotton Fiber Bundles and Single Fibers

SUMMARY: The main mechanism governing fiber-grid bar interactions and fiber damage in cotton gin lint cleaners is friction. Preliminary investigations of fiber-metal friction with different processed cotton samples has shown correlation between friction and short fiber content. We have conducted tests with a large variety of cotton genotypes to compare bulk friction properties to fiber damage during lint cleaning. We have also used Surface Force Microscopy to conduct extensive tests on single fibers to determine multiple properties related to fiber surface friction. We believe the data we have collected will provide insight to cotton breeders and other scientists interested in reducing cotton fiber damage during ginning and textile processing.