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Feasibility of Applying Seedcotton Cleaning Principles to Lint Cleaning

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Cotton (*Gossypium hirsutum* L.) fibers are cleaned at gins with saw-type lint cleaners to improve the market value, but the aggressive saws sometimes harm the quality of the fiber. Cleaners for seedcotton are less aggressive than saw-type cleaners. In an attempt to improve fiber quality during ginning, experiments were conducted to evaluate the feasibility of cleaning lint by applying principles and systems normally used to extract foreign matter from seedcotton. The cleanliness and quality of lint cotton cleaned with 10 combinations of seedcotton cleaning machines were compared with saw-type lint cleaners. The cleaning efficiency of one saw-type lint cleaner averaged 54%, and the efficiencies of seedcotton cleaners used as lint cleaners ranged from 9 to 16%. There was a significant improvement in the classers' leaf grade designations when lint was cleaned with each of the seedcotton-type cleaners. Staple lengths tended to be shorter after cleaning with saw-type cleaners. A modified non-saw cleaner appears practical and could help preserve fiber quality at cotton gins.

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