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## Survey of Seed-cotton and Lint Cleaning Equipment in U.S. Roller Gins

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Pima cotton is roller ginned to minimize damage to the fiber. The U.S. roller ginning industry has changed over the years. Since 1989, the majority of gins have shifted from Arizona to California. The number of gins in the United States has also fallen by nearly 50%, but those operating today have more gin stands and process cotton at nearly twice the rate. This survey was conducted in 2004-2005 to better understand how current roller ginning machinery affects Pima cotton quality. There were few similarities in machinery set-ups for seed-cotton cleaning among gins. Most gins use one or two cylinder cleaners and an air-type lint cleaner for lint cleaning. The trend in roller ginning today is toward aggressive seed-cotton cleaning and gentle lint cleaning to limit fiber damage. Cotton property measurements taken before and after cleaning showed that, in general, cleaning machinery significantly reduced foreign matter content in seed cotton and lint. Also, cleaning machines tended to reduce fiber length and increase neps. There was an average increase in lint value as measured by current classing standards from \$1.66 before lint cleaning to \$1.72 kg<sup>-1</sup> (\$0.755 to \$0.781 lb<sup>-1</sup>) after lint cleaning. This increase could not be attributed to any specific type of lint-cleaning machine. No definite recommendations for foreign matter removal at U.S. roller gins are made herein, but the results indicated the need for controlled evaluations of individual cleaning machines.