

Is it possible to check micro ginning fiber quality preservation performance using reference seed-cotton materials?

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Abstract

In sub-Saharan countries, simple micro-gin, without seed-cotton cleaner nor lint-cleaner, is often used as a reference device for characterizing the performance of industrial gin plants for fiber quality preservation. It is however useful to check if this micro-gin itself is properly set and maintained. Reference seed-cotton materials, well homogenized with known variability level, and available in large quantities, may serve the purpose of monitoring the performance of the micro-gin in order to detect any malfunction or any drift. Therefore, it is expected that any deviation in SITC results on ginned reference seed-cotton materials from predetermined data would alert on altered ginning conditions. This experiment demonstrates the feasibility of setting mean values and confidence intervals on measured SITC characteristics on fiber samples, to later detect any malfunction or drift that may occur in practices, settings, or degradation in a micro-gin.