

## COMPARISON OF METHODS FOR ESTIMATING FIBERS PER SEED

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### Abstract

The number of fibers produced per seed is a component of lint yield in cotton and has been the focus of recent research. Information from several fiber testing instruments can be used in the calculation of fibers per seed in cotton, but the relationship between the results derived from these methods is unknown. Fiber samples from 11 cultivars were tested using three different methods. Length and fineness measurements from AFIS constituted one method, length and micronaire measurements from HVI constituted a second method, and fibrograph length and arealometer fineness measurements constituted the third method. Length measurements were well correlated ( $r^2$  values between .73 and .98). Fineness measurements were also correlated ( $r^2$  values between .71 and .89). Number of fibers per seed was calculated using these measurements, and although the results differed in magnitude, all methods seemed to reflect the same general trends. All methods resulted in a similar ranking of cultivars. This ranking was also similar to ranking based on weight of lint per seed. Number of fibers per seed appears to be highly dependent on weight of lint per seed. There does not appear to be any advantage to using fibers per seed rather than lint per seed for the purpose of comparing cultivars.