

**COMPARISON OF FIBER  
PROPERTIES BY FRUITING POSITIONS  
OF TWO CULTIVARS**

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**Abstract**

Fiber properties were compared from cotton (*Gossypium hirsutum* L.) bolls that were harvested by fruiting sites from DES 119 and Deltapine 90 cultivars in 1994. Each cultivar was replicated four times. All non aborted plants in a 10-foot strip were mapped from each replication. Fiber properties of the cultivars differed significantly. Deltapine 90 fibers were stronger, shorter, more mature, flatter, and had a smaller perimeter than DES 119. Bolls from positions 1, 2, and 3 produced 78 vs. 73%, 19 vs. 21%, and 4 vs. 6% of the total yield for DES 119 and Deltapine 90 respectively. Seed size decreased and lint percentages increased at the upper nodes. Micronaire and maturity were highly correlated ( $r=.98$ ). Fiber from bolls at fruiting sites that developed later in the season were less mature and had a lower micronaire. Arealometer data indicated that immature fibers were flatter and more ribbon like than the mature fibers. Fiber from all positions was stronger at the upper nodes than the middle and bottom fruiting sites. These upper fruiting sites also produced fibers with lower maturity, and less wall thickness. First position bolls produced the majority of the lint yield and also produced better quality fibers. These data show the importance of good management for early season production as fibers produced late in the season had lower quality than those from early and middle season bolls.