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AN ANALYSIS OF FIBER PROPERTIES IN SECOND CROP COTTON CULTIVATED USING TWO DIFFERENT SOWING METHODS

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Abstract

This study aimed to investigate the effects of various sowing methods on the quality characteristics of second-crop cotton fiber during the 2015-2016 production seasons in the trial field of the Batı Akdeniz Agricultural Research Institute in Antalya, Turkey. Seven cotton genotypes, including five commercial cotton cultivars and two cotton lines, were employed in a randomized block experimental design with divided plots. Two different tillage processes, namely direct sowing on stubble and sowing after traditional tillage, were implemented. Significant differences were observed among genotypes for all examined fiber quality traits. Notably, short fiber ratio and elasticity properties exhibited significant differences between applications. Short fiber ratios ranged from 6.26% to 7.95%, with a significant year*genotype interaction. Fiber strengths varied between 30.65 g/tex and 37.69 g/tex, with a significant year*application interaction. These variations were attributed to the climatic environmental factors during the trial seasons and the region's extended history, indicating their substantial impact.

Key words: conventional sowing, cotton fiber, second crop, sowing on stubble

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