

ABSTRACT
**THE DETERMINATION OF RELATIONSHIPS BETWEEN LINT
QUALITY AND SEED CHARACTERISTICS
IN COTTON (*Gossypium hirsutum* L.)**

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In this study, which carried out with objective of evaluating relationship between fiber quality and seed quality characteristics, 30, 40, 50, 60, 70, 80, 90 and 100 daily bolls of Fantom, GSN-12 and Carmen cotton varieties were harvested after pollination. The experimental design was the Randomized Complete Plot Design with two factors. The regression analyses were performed on the basis of varieties according to the harvesting dates, and the correlation coefficients between seed quality and lint quality, fatty acid were determined.

Boll weight, ginning percentage, fiber fineness, fiber length, fiber strength, short fiber index, fiber maturity index, length uniformity index, color reflectance (Rd), yellowness (+b), thrash count, nep count, seed coat nep count, immaturity fiber ratio, 100 seed weight, standard germination rate, cool germination rate, seed vigor index, free fatty acid content, linoleic acid, linolenic acid and stearic acid were altered by harvest date. There were significant linear association in fiber reflectance values, trash content and spinning consistency index, while significant second degree quadratic association were obtained for all other characteristics. The correlation coefficients between all fiber characters (except length uniformity fiber reflectance, number of fiber thrash, short fiber index) and seed germination values were found significantly. The optimal harvest time in terms of lint and seed quality parameters and free fatty acids was the first 20-day period following boll opening for three cotton cultivars. According to determined correlation coefficients, the significant relationship between standard germination rate and lint quality parameters resulted by the variation into the same year or same cultivar.

Keywords: Cotton, Fiber quality, Cottonseed quality, Free fatty acids, Fatty acid composition, Germination