

ABSTRACT

EFFECT OF GROWING CONDITIONS ON YIELD, FIBER AND SEED CHARACTERISTICS IN THE COTTON PRODUCTION OF CENTRAL DISTRICT OF AYDIN

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2014, 89 pages

This study, has been performed to examine effect of growing conditions on yield, fiber and seed characteristics of cotton in Aydin. For this purpose, soil, leaf and lint samples were collected at 30 different fields of Aydin. The inputs used in the production process and growing conditions have been identified. The results of soil and leaf samples analysis were evaluated with critical values in order to determine the soil fertility level. In addition, the overall distribution of fiber and seed traits and their relations with soil properties and growing conditions have been determined.

According to research results, there were some problems on appropriate fertilizer applications related with soil and plant requirements. Lime content and pH of soil samples were high level, while organic matter, potassium and boron contents were below the sufficiency levels in the great majority of the research area. Similarly, when the leaf sample analysis evaluated, nitrogen and phosphorus contents were in low level in the large portion of the land. In addition, oil and feed values of cotton seed were found to be within the limits. Yield, yield components and quality parameters had statistically significant correlations with the soil characteristics and growing conditions. Particularly, soil salt, N, K, Ca and Mg contents, sowing date, irrigation number and amount of fertilizers used were the most effective parameters on the yield, fiber and seed characteristics of cotton.

Key words: Cotton, yield, leaf and seed characteristics, correlation.