ABSTRACT

M.Sc. Thesis

THE EFFECT OF DIFFERENT PİX AND NITROGEN APPLICATION LEVELS ON YIELD AND YIELD COMPONENTS IN COTTON

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The purpose of the study was to determine the effect of different Pix and N application levels on yield, yield components and fiber quality parameters in cotton (*Gossypium hirsutum* L.) var Carmen. Experiment was conducted in split-split blocks design with four replications at Adnan Menderes University Agriculture Faculty Experimental station in 2008. In the study 0, 6, 12, 18 and 24 N kg/da Nitrogen level was main and two rates of Pix 0, 100 and 150 cc/da was sub-plots. Nitrogen by Pix interactions were significant for all investigated characters except for lint percentage and micronaire. Among the investigated traits, the highest value for number of bolls per plant, boll weight, seed cotton yield per plant, and seed cotton yield was detected at 18 kg/da N and 100 cc/da Pix application. Pix treatment reduced plant height for all nitrogen levels. High N level application increased the fiber length and micronaire, however increased Pix ratio did not affect fiber length but decreased micronaire. The response of fiber strength to N and Pix application was different, and the highest fiber strength values was obtained from 6 - 18 kg/da N and 100 cc/da Pix, and 12 kg/da N and 0 cc/da Pix application. These results indicated that increased N rates with the hope of increasing yields could not be adequately controlled by additional Pix application.

Key words:
Gossypium hirsutum L., seed cotton yield, fiber quality parameters.