*COTTON YIELD AND FIBER PROPERTIES AS AFFECTED BY NITROGEN AND PHOSPHORUS LEVELS AND TIME OF NITROGEN APPLICATION**

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ABSTRACT

The present investigation was carried out in the Experimental Farm, Faculty of Agriculture at Moshtohor, Zagazig University during 1990 and 1991 seasons to study the response of cotton to N, P levels and time of nitrogen application as well as their interaction. The treatments were designed split plot with four replications. The results could be summarized as follows: Seed cotton yield per feddan, yield components and fiber properties were not significantly affected by phosphours levels in combined analysis.

Plant height and number of unopened bolls/plant were significantly increased by increasing N level up to 90 kg per feddan. Number of plants per feddan at harvest and lint percentage were decreased by increasing N levels.

Applying 30 kg N/fed. gave the highest seed cotton yield per feddan, lint yield/feddan as well as fiber length. Seed index was significantly increased by increasing N levels in both seasons, whereas number of sympodia per plant, number of open bolls / plant, boll weight, seed cotton yield / plant and fiber properties were not significantly affected by N levels.

The best time of N fertilizer application was obtained by applying 1/2 N after thinning + 1/2 N dose before the second irrigation. On the other hand, yield components and fiber properties were not significantly affected by application time.

The interaction between phosphorus and nitrogen levels affected significantly number of open bolls / plant, boll weight, seed cotton yield / fed. and lint yield / feddan. Seed cotton yield / fed. and lint yield / fed. were significantly affected by the interaction between N levels and

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* This study is a part of the project NARP Moshtohor No, 247 (Econ. Agric., and Ext. Dept. Fac Agric. Moshtohor).