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EFFECT OF FERTILIZATION ON YIELD AND FIBER
PROPERTIES OF SOME COTTON CULTIVARS

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ABSTRACT

The effect of N and P on seedcotton yield, boll and fiber properties of three cultivars were studied during 1984 and 1985 seasons. The results showed that N is an important factor affecting seedcotton yield/fad., number of open bolls/plant, boll weight and length parameters. P applied had a significant effect on seedcotton yield and its macrocomponents given above. Differences among cultivars were significant for number of open bolls/plant, boll weight lint percent, staple length, fiber fineness and strength. Fiber properties were not affected by applied P in the three studied cultivars. A significant cultivar x N interaction was detected for seedcotton yield/fad. for all cultivars. And significant N x P x cultivar interaction was detected for the number of boll/plant.

INTRODUCTION

Efforts to determine varietal requirements of nitrogenous fertilization are superfluous. Nitrogen rates as 45 to 60 kg./fad. were regarded by many investigators as adequate to support growth, yield, fiber development and quality, Rizk (1974), Kerallah (1979), Yassen (1979) and Shahine (1980). Less attention, however, has been devoted to fertilization with phosphorous in its relation with nitrogen. In addition, contradictory results were reported. Excess phosphorous was reported to cause rapid growth and earlier than usual cut-out (Eid and Abd El-Samie, 1958). Others reported increases in seedcotton yield with addition of phosphorous (Allam *et al.*, 1957 and El-Gabaly, 1958). Yet, others found no beneficial effect as a result of phosphorous application on seedcotton yield, Abo El-Ella and El-Baradeiy (1958). Hefni *et al.* (1978), reported favorable response of Giza 69 to phosphorous fertilization.

With the rapid run-out of cotton varieties and appearance of new and dissimilar ones into cotton growing areas, the optimum growing practices are not always the same.