

EVALUATION OF SOME NEW SYNTHETIC VARIETIES OF MAIZE

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ABSTRACT

These work was undertaken at the Agricultural Research Experimental Center of the Faculty of Agriculture, Moshtohor to evaluate three new synthetic varieties viz, Moshtohor-1, 2 and 3. These new varieties as well as two local ones, i.e., Nab El-Gamal and Cairo-1 were evaluated under different nitrogen fertilization levels during the two successive seasons 1986 and 1987. The differences among varieties were significant for all traits except for number of kernels per row. Moshtohor-1 produced the highest grain yield per plant and outyielded Nab El-Gamal, Cairo-1, Moshtohor-2 and 3 by 16.77%, 8.19%, 10.89% and 7.30%, respectively.

Nitrogen fertilization had significant effects on grain yield per plant and the best treatment was 90 kg N/faddan. Whereas, the other studied traits were not significantly affected by nitrogen treatments.

INTRODUCTION

Maize (*Zea mays*, L.) represents one of the most important summer cereal crops grown in Egypt. It cultivated areas reached 1.8 million faddan* (1986). Increasing crop potentiality of maize is of national interest for breeders. Therefore, many attempts are being made either to improve the already cultivated varieties or to develop new ones. Synthetic varieties are considered as one of the main activities to produce new maize varieties, which could be utilized as open-pollinated varieties or they may serve as sources for developing new inbred lines.

* Ministry of Agriculture, Statistics Section.