

EFFECT OF IRRIGATION INTERVALS AND PLANT DENSITIES ON SOME VARIETIES OF CORN

By

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ABSTRACT

Four field experiments were carried out during 1990 and 1991 seasons at the Experimenta Farm, Faculty of Agriculture, Minufiya, University, Shebin El-Kom to study the effect of irrigation intervals, plant densities on some agronomic characters, yield and yield components of some corn, varieties.

Plant height, ear height, L.A., No. of ears/ plant, grain yield/plant and fadden were significantly increased with the decrease in irrigation period.

The highest values for yield and its components i.e. No. of ears/plant, No. of rows/ear, No. of kernels/ row, grain yield/ plant and fad. were obtained from T.W.C. 310, while composite 5 gave the lowest values for yield and its components.

The No. of plants / hill had a significant effect on leaf angle, No. of ears/plant and grain yield/plant. However, the other characters did not seem to be influenced.

The highest grain yield / fad. was obtained when hills spaced at 30 cm between hills, but without significant superiority over 40 cm apart .

T.W.C. 310 and D. C. 204 had the highest mean values for all the studied characters. While composite 5 gave the lowest mean values for the most studied traits.

The highest mean value for grain yield/fad. was obtained from 40 cm spacing with two plants/hill.

INTRODUCTION :

Maize (*Zea mays*, L.) is one of the most important cereal crops in Egypt and the world. It ranks the third of the world cereal crops. The allotted area in Egypt is about two million faddans with an average production of 16 ardabs/ fad. However, the total production is less than the needs of the local consumption. Therefore, efforts are focused on increasing productivity of this crop by growing high yielding new varieties under the most favourable cultural treatments .