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بسم الله الرحمن الرحيم

HOSSAM MAGHRABY

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

HOSSAM MAGHRABY

بعض الوثائق الأصلية تالفة

HOSSAM MAGHRABY

شبكة المعلومات الجامعية

بالرسالة صفحات

لم ترد بالأصل

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EFFICIENCY OF SOME MICROELEMENTS APPLICATION METHODS UNDER IRRIGATION REGIME ON SOME MAIZE GENOTYPES

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By

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B. Sc. Agric. (Soil Science), Cairo Univ., 1980
M. Sc. Agric. (Agronomy), Ain Shams Univ., 1992

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Faculty of Agriculture
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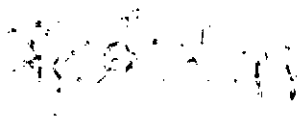

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ABSTRACT

Adel Sayed Osman, EFFICIENCY OF SOME MICROELEMENTS APPLICATION METHODS UNDER IRRIGATION REGIME ON SOME MAIZE GENOTYPES

Unpublished Doctor of Philosophy Dissertation, Univ. of Ain Shams, Faculty of Agriculture, Department of Agronomy, 1997

Two field experiments were carried out in 1993 and 1994 seasons. The maize cv. single cross 10 and three way cross 310 were used for this investigation to study the effect of microelements application methods and irrigation intervals on growth and agronomic characters (plant height, number of leaves/plant, stem diameter, dry weight of leaves/plant, dry weight of plant, relative growth rate, number of green leaves/plant, percentage of barren plants, number of grains/row, shelling percentage, weight of 100 grains, grain yield, straw yield, harvest index, crop index, total nitrogen percent in grain, protein content in grains, chlorophyll A and B in leaves and zinc, iron, manganese uptake/plant). Irrigation intervals; at 12 days intervals during the whole growing season, at 17 and 12 days intervals during vegetative and flowering stages, respectively, and at 12 and 17 days intervals during vegetative and flowering growth stages, respectively. Treatments of micronutrients (i.e. Fe, Zn and Mn) application methods were grain coating and foliar spraying. A separate experiment with a split-plot design was devoted for each maize cultivar.

The results obtained showed significant reduction in all studied traits except No. of barren plants and relative growth rate by prolonging irrigation intervals to 17 days especially during vegetative growth stage, grain coating caused significant increment in all studied characters except No. of barren plants. The highest grain yield was obtained by irrigation at 12 days intervals during the whole growth season with micronutrient grains coating. The results suggest that micronutrient application (particularly grain coating) reduce the deleterious of soil moisture deficit.

Key words: Maize, Micronutrient, Zinc, Iron, Manganese, Grain coating, Foliar spraying and Irrigation intervals.

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