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بسم الله الرحمن الرحيم

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التوثيق الالكتروني والميكروفيلم

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بالرسالة صفحات

لم ترد بالأصل

HOSSAM MAGHRABY

EFFECT OF SOWING DATES AND WATER-STRESS ON PRODUCTIVITY OF BEAN (*Phaseolus vulgaris* L.) PLANTS

BY

AMANY NAGASHY KARAS KERLOUS
B.Sc. (Agric.) in Horticulture (Vegetables), 1991
Alexandria University

A thesis submitted in partial fulfillment

of

the requirements for the degree of

MASTER OF SCIENCE

in

Agriculture

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Department of Horticulture
Faculty of Agriculture
Ain Shams University

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Approval Sheet

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Date of examination: 4 / 1 / 1997

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ABSTRACT

Amany Nagashy Karas, Effect of sowing dates and water-stress on productivity of bean (*Phaseolus vulgaris* L.) plants. Published Master of Science, Ain Shams University 1996.

Two experiments were carried out during the two successive seasons 1994 and 1995 to investigate the possibility of reducing water requirements of bean plants. Using two cultivars (Giza3 and Bronco) grown in lysimeters, the actual water consumption of this crop in comparison with the based-climate calculated data was determined. There was respectable difference in water consumption between the two dates of sowing. The vegetative growth was reduced at the earlier date of sowing for both of cultivars while the yield was not much influenced by sowing dates.

Pot experiments were carried out to investigate the influence of water-stress on growth, flowering and fruiting of two snap bean cultivars (Giza3 and Bronco). The seedlings were subjected to different levels of water-stress (50-40%), (75%-65%), (100-90%) and (125%-excessive water) of field capacity by weight. The treatment of (125%-excessive water) was applied once at the beginning of the experiment then it was added as mean of the amount of water added to the (100-90%) treatment. Plant growth parameters were recorded and calculated and pods' quality was estimated. The results obtained showed that (100-90%) and (75-65%)

treatments were the most preferable for Giza3 and Bronco cultivars, respectively. The effects of different levels of water stress on both cultivars are discussed.