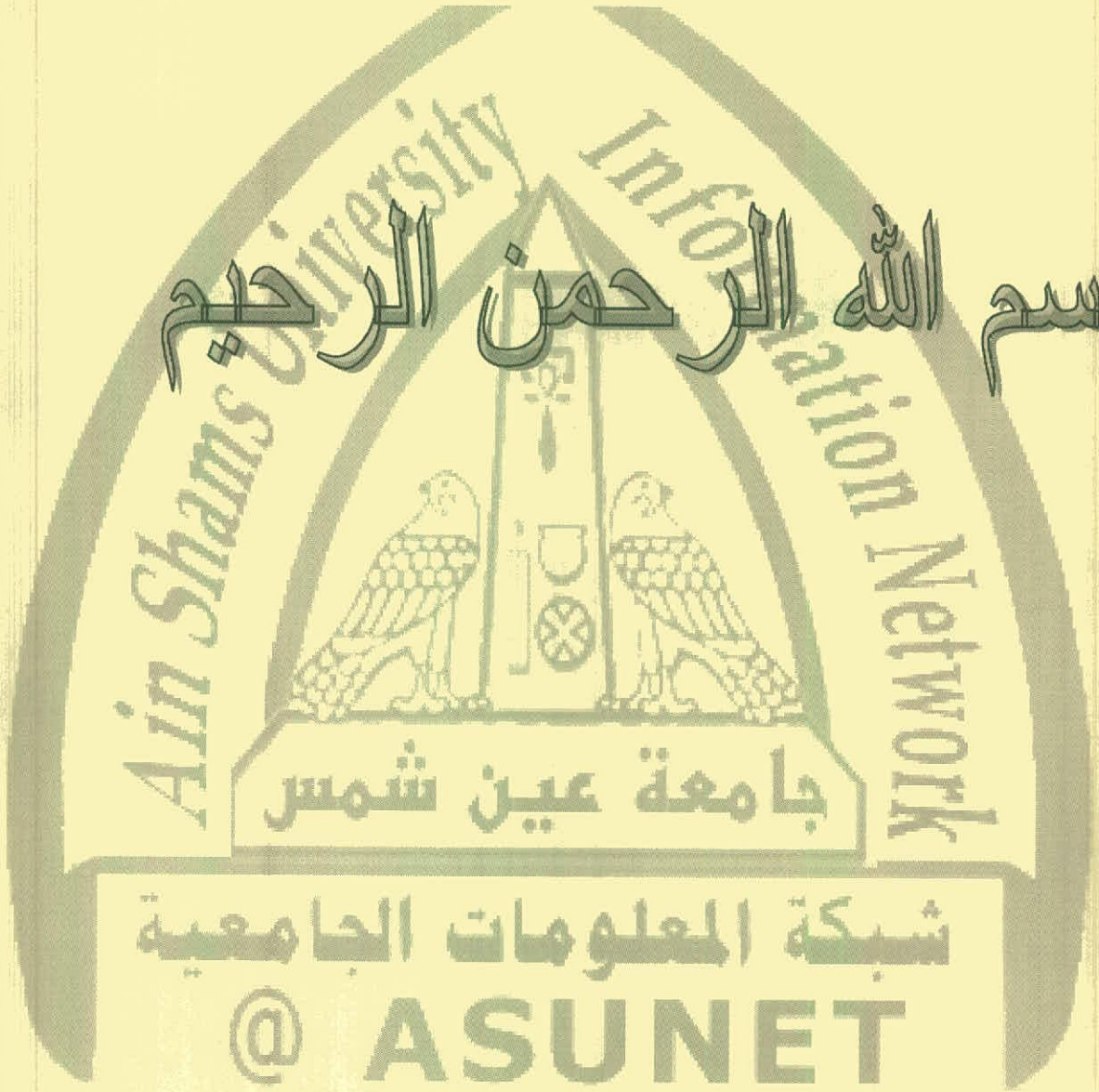
شبكة المعلومات الجامعية



بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائـــــــق الاصليـــــة تالفـــة

بالرسالة صفحات لم ترد بالاصل

PRODUCTIVITY OF CERTAIN WHEAT CULTIVARS UNDER RAINFED CONDITIONS

By
Ahmed Abd El-Ati Ahmed

B.Sc. Agriculture (Agron.Production),Ain Shams Univ.,1988
M.Sc. Agriculture (Agronomy), Ain Shams Univ.,1995

A thesis submitted in partial fulfillment
of
requirement for degree of

Doctor of Philosophy
In

Agricultural science
(Agronomy)

Agronomy Department
Faculty of Agriculture
Ain Shams University

1999

APROVAL SHEET

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Date of examination: 2 /12/ 1999

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ABSTRACT

Ahmed Abd El-Ati Ahmed "Productivity of Certain Wheat Cultivars Under Rainfed Conditions" Unpublished Doctor of Philosophy Dissertation, Univ. of Ain Shams, 1999

Two Field experiments were carried out in the Desert Research Centre (D.R.C.) Experimental Station at Mariout region, North Western Coast of Egypt, during 1996/97, 1997/98, 1998/99 winter seasons each, to study the effect of supplementary irrigation treatments and some growth regulators application on growth, water status, chemical composition, yield and its attributes of wheat.

The study included two examined wheat cultivars Sakha-8 & Gemeza-3, in addition to, 16 treatments were the combination of four supplemental irrigation treatments i.e. (either rainfed, sowing, heading or filling irrigation) and four growth regulators treatments i.e. (control, IAA, GA_3, or CKs).

Results obtained could be summarized as follows:

1. Under inadequate rainfed conditions, sowing irrigation application was the most important treatment for increasing plant emergency followed by improving all growth characters, water status, chemical composition, yield and its attributes.
2. Under enough rainfed water supply, the heading stage irrigation seemed to be the efficient treatment for progressing most of the studied characters i.e. growth characters, water status, chemical composition, yield and its attributes.
3. Growth regulator application led to increase wheat production as a result of encouraging all plant growth characters, water status, chemical composition, yield and its attributes. GA_3 application was more effective than IAA and CKs in increasing wheat yield of both two examined varieties under

different conditions of drought stress levels. This because it encouraged the accumulation of the endogenous IAA, GA_3 and CKs associated with enhancing juvenility and relaying senescence metabolism due to decreasing the endogenous levels of ABA and Proline.

4. In the interaction level; under severe drought conditions of 96/1997 sowing irrigation x GA_3 was so recommended for increasing the wheat yield and its attributes. While in 97/1998 results indicated that highest observations of yield and its attributes were drived from heading irrigation x GA_3 , on the other hand heading x CKs was recommended for the same target under 98/1999 conditions.

5. The models observed in this study were :

Biological yield = grain yield x 300 % ⟶ (Sakha-8)

Biological yield = grain yield x 350 % ⟶ (Gemeza-3)

Key words: Wheat, Cultivars, Supplementary irrigation, Growth regulators, Productivity, Chemical composition, Water status, Yield, Yield attributes, Multiple regression models .