بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

EVALUATION OF SOME HEAT TOLERANT WHEAT GERMPLASMS FOR YIELD AND YIELD QUALITY

BY

AMAL HASSAN SELIM

B.Sc.Agric., (Breeding), Ain Shams Univ., 1989.

M.Sc. Agric., (Agronomy), Ain Shams Univ., 1997.

A thesis submitted in partial fulfillment of
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Ain Shams University

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APPROVAL SHEET

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Date of Examination 29 / 4 / 2000

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ABSTRACT

Amal Hassan Selim, Evaluation of some heat tolerant wheat germplasms for yield and yield quality. Unpublished Doctor of Philisophy Thesis, Agron. Dept., Fac. of Agric., Ain Shams Univ., 2000.

Five field trials were carried out in Agricultural Experimental farm, Kom-Ombo Experimental Research Station, Agric. Res. Center during 1997/98 and 1998/99 growing seasons to evaluate 10 soft and 2 hard wheat genotypes for yield and its quality under different sowing dates.

The data observed significant decreases in period to heading, period to maturity, spikes number/m^2, main spike length and its grain number as a result of delaying sowing date in both two growing seasons. The number of spikes/m^2 was the character which greatly and negatively affected by late sowing date. Yield parameters, i.e., grain, straw and biological yield were diminished by delaying sowing date. The highest yielding capacity was noticed by sowing in mid November.

The data cleared significant decrement in 1000-grain weigh and increment each of crude protein, wet and dry gluten by delaying sowing date. The performance of gluten to absorb water was diminished versus delaying sowing date. In addition, the flour percentage in milling grains was also decreased by delaying sowing date being the highest in grains of Sakha genotypes.

The data revealed that Sids 2 obtained the highest grain yield by sowing in mid December in the both growing seasons. Wheat plant Gemmiza 3 had significant highest 1000-grain weight at all studied sowing dates in both two growing seasons followed by hard wheat Benisuef 1 and Sohag 3. Among the crude protein content, it reached the highest level in grains of hard wheat genotype Sohag 3 by sowing in mid December in the first season and at the three sowing dates in the second season.

Grains of Gemmiza 3 and Gemmiza 5 had the highest wet and dry gluten content by sowing in mid December and mid January in both growing seasons. Meanwhile, grains of Sohag 3 had the highest values by sowing in mid November in the second season. While grain of Sids 2 had the lowest content of wet and dry gluten, its hydration value was the highest followed by Sakha 92.

Every wheat genotype characterized by one or more of proteins that found in the grains. These proteins did mot affected by either sowing date or heat stress and differed in their molecular weight depending on wheat genotype. Sowing date affected only on their amount in grain protein. These proteins concentration may increased or decreased versus sowing date. When wheate sown late in the season, the pattern of grain storage protein changed markedly and new bands undetectable at normal sowing date were produced. Therefore, these proteins could be called heat shock proteins (HSP_S).

Key Words:
Wheat, Wheat Proteins, Sowing Date, Heat Stress, Electrophoresis.

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