توصيف وتقييم بعض التراكيب الوراثية في القمح تحت ظروف بيئية متباينة

2 – التحليل البياني

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CHARACTERIZATION AND EVALUATION OF SOME WHEAT GENOTYPES UNDER DIFFERENT ENVIRONMENTAL CONDITIONS

2- GRAPHICAL ANALYSIS

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(Received: Mar. 27 , 2012)

ABSTRACT: *Gene action and heritability were studied in a 8 × 8 diallel set of bread wheat for heading date, maturity date, grain filling period, plant height, number of spikes per plant, number spikelets per spike, 1000-grain weight, number of kernels per spike, grain yield per plant and protein percentages under Gemmeiza location (normal temperature) and Mataana location (high temperature). The additive genetic variance ($\hat{D}$) was found to be highly significant for traits studied at the two different locations except number of spikes per plant at the two locations, however number of spikelets per spike and grain yield per plant at Gemmeiza location. The dominance genetic variation $\hat{H}_1$ and $\hat{H}_2$ were found to be highly significant for most traits studied at the two different locations. Moreover, the estimated values dominance components $\hat{H}_1$ and $\hat{H}_2$ were found to be greater in their magnitude than the corresponding additive genetic variations ($\hat{D}$) for most traits under investigation. The average degree of dominance ($\hat{H}1/\hat{D}$)1/2 was greater than unity at the two locations for all traits under investigations. High to moderate heritability values were detected for; plant height, 1000-grain weight and number. of kernels per spike at the two locations as well as grain filling period and protein percentage at Gemmeiza location. The graphical analysis demonstrated the existence of complete dominance for heading date at Mataana location as well as number of spikes per plant and protein percentage at Gemmeiza location. Partial dominance was also found for grain filling period, number of spikelets per spike at Gemmeiza location as well as plant height and number of kernels per spike at Mataana location. Over dominance was detected for heading date, plant height and number of kernels per spike at Gemmeiza location as well as grain filling period, number of spikes per plant, number of spikelets per spike and protein percentage at Mataana location., also maturity date, 1000-grain weight, grain yield per plant at Gemmeiza and Mataana locations.*

and Graphical analysis ***Key words:*** *Wheat, Diallel cross, Gene action, Heritability*