Environmental effect on productivity and quality of some wheat varieties and their mixtures

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environmental effect on productivity and quality of some wheat varieties and their mixtures, three field experiments were carried out at agriculture research and experiment station of the faculty of agriculture of moshtohor, benha university in the three seasons of (1996-97 to 1998-1999) to investigate the performance of four wheat varieties (sids7, sakha 69, sids 1 and gemmiza 3) and three .2qual mixtures (sids 7 + sakha 69, sids 7 + sids 1 and sids 7 + gemmiza 3) under three different environments i.e sowing dates, dressing seeds by coatengen and seed inoculation by rhizobactrium. the soil of experiments was physically as clay in texture and chemically heaving ph (8.2), organic matter (2.45%) and available p, k and microelements (fe, mn, zn and s) 4.61, 14.50, 13.80, 8.5, 11.80 and 8.4 mg/kg soil respectively.experiment i effect of wheat entries and sowing dates of productivity and quality of wheat : three field trails were carried out to investigate the effect of sowing dates (early in 28th november and the late in 12th december) on the productivity and quality of four wheat varieties and three equal mixtures. the experimental design was split plot design in three replication, sowing dates were arranged in the main plots and the wheat entries in the sub-plots; sub-plots area was 9.75m- about (k 430 /fed.). seeding rate in the mixture plot 3000 seeds (1500 seed from each varieties), the result could be summarized as follow : - 1 - effect of sowing date : early sowing of wheat on 28th november significantly increased plant height, no. of spikes/m2, no. of spikelets/ spike, weight , 7-the interaction between sowing dates, entries and seasons (d x e x s):results show that the interaction was significant for plant height, flag leaf area, spike length, no. of spikes/m2, no. of spikelets/ spike, no. of kernels/spike, weight of kernels/spike, 1000-kernel weight, straw yield, harvest index, while grain yield and grain protein percentage were not significant, 8-effect of mixing:mixing stand affected of flag leaf area, no. of spikes/m2, weight of kernels/spike, 1000-kernel weight, grain yield and harvest index. mixed stand gave higher means those characters than pure stand. results indicate that the second season gave higher means of plant height, spike, no. of spikelets/ spike, no. of kernels/spike, weight of kernels/spike and straw yield but the first sowing date gave a significant higher means on all wheat characters except number of kernels/spike, whereas varieties and their mixtures gave greater means. sids 7 for flag leaf area (62.28cm), spike length (12.00cm), no. of spikelets/ spike (19.45), no. of kernels/spike (35.74) and straw yield (2271) besides the mixture sids 7 + gemmiza 3 gave the greater means of 1000- kernel weight (45.08) and harvest index (38.00).experiment ii effect of wheat entries and seed coating with coatengen on productivity and quality of wheat:two field experiments were carried out at 1996-97 and 1997-1998 seasons to investigate the effect of wheat entries (the same wheat varieties and their mixtures of the first experiment) under the effect of dressing the seeds with coatengen (a mixture of fe, mn, zn and s) on the productivity and quality of wheat plants the experimental design was split plot design in two replicates, wheat entries were arranged in, gemmiza 3 gave the highest grain yield (1456kg/fed.) while the uninoculated of gemmiza 3 produced the lowest grain yield (1108kg/fed.)in the second season plant height, no. of spikes/m2, no. of kernels/spike and 1000-kernels weight gave the significant values. all the grain yield did not reach the significance, the results showed that the inoculated seeds of sids 7 + gemmiza 3 produced the highest grain yield (1661kg/fed.) while the untreated seeds of gemmiza 3 gave the lowest grain yield (1069kg/fed.) in the second season.