

Genotypic and Phenotypic Distances between Chosen Varieties of Wheat (*Triticum aestivum* L.)

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Abstract: The aim of this study was to estimate relationship between genotypic and phenotypic effects in set of wheat genotypes. Fourteen varieties of wheat (Begra, Charger, TAD, Elena, Flair, Kobra, Kris, Mikon, Alidos, Aristos, Aron, Borenos, Bussard, Carolus) and their F₂ hybrids obtained after crossing in a line × tester scheme were examined with respect to technological traits: water absorption, dough stability, dough elasticity, dough development, degree of softening, protein content, sedimentation value. In addition, RAPD (random amplified polymorphic DNA) polymorphism was examined in studied genotypes. Thirty-four 10-mer primers were tested and yielded 271 bands among 155 were polymorphic (57%). The data were analysed using multivariate analysis of variance. Mahalanobis distances between genotypes, evaluated for all the studied traits treated simultaneously, were used as a measure of phenotypic distances between the genotypes. Genetic distances for all pairs of compared genotypes were calculated and a dendrogram was constructed using unweighted pair group method. Correlation between genotypic and phenotypic effects in set of wheat genotypes was positive, but not significant.