

The Influence of Spikelet Position on Mass and Number of Wheat Grains

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Abstract: A goal of our research was to analyze the influence of the spike morphological characteristics on a wheat yield. After a three year experiment, we chose genotypes with the maximum and minimum yield. The genotypes with a higher yield (HY) had a significantly longer spike, greater mass, lower number of spikelets (total, fertile and sterile) and greater mass of grain/spike. For all the genotypes, a normal distribution of a number and a mass of grain/spikelet, of a spike main shoot, was noticed. The lowest values of the former parameters with a highest coefficient of variation in the basal (the first) spikelet were also noticed. HY genotypes in comparison to lower yield (LY) genotypes had a greater mass of grain/spikelet, in almost all analyzed positions of a spikelet. It was also identified a greater number of grain, but only in a half of the total number of analyzed spikelets. In both cases, those differences were not significant. For LY genotypes, a distribution of a number and a mass of grain/spikelet (in accordance to the spikelet position), had a higher genotype dispersion. In both groups, the central spikelets had the highest number and the greatest mass of grain.