

**CORRELATION AND PATH COEFFICIENT ANALYSES OF GRAIN YIELD AND
ITS RELATED COMPONENTS FOR SOME COMMON WINTER WHEAT
GENOTYPES**

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ABSTRACT

The aim of the study was to determine the interrelationship and the direct and indirect effects of some yield components among themselves and with the grain yield in the 49 common winter wheat varieties with an origin from different countries. The experiment was conducted in the experimental field of IPGR-Sadovo, Bulgaria during 2017-2019 growing seasons in the randomized block design in three replications and 10 m² plot size. The data were recorded for a number of days to heading, plant height, spike length, number of spikelets per spike, number of grains per spike, grain weight per spike, thousand-kernels weight and grain yield per hectare. Grain yield per ha correlated positively and significantly with plant height, spike length, grain weight per spike and thousand grain weight. Path coefficient analysis revealed that the grain weight per spike, spike length and plant height had the highest direct positive effect on the grain yield per hectare. The results of study could be useful as a selection criteria to increase grain yield in common winter bread wheat.

Key words: correlation, path analysis, common winter wheat, yield, yield components