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ACCELERATED ASSESSMENT OF WINTER WHEAT (*TRITICUM AESTIVUM* L.) GENOTYPES RESISTANCE TO NEGATIVE TEMPERATURES

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The features of the reaction of winter wheat seeds of different varieties to the impact of a frost shock (*FSh*) were studied. As a boundary temperature for *FSh*, named FSh_b, the *FSh* that caused up to 50% decrease in seeds (with an average resistance to frost) germination was considered. Based on the impact of FSh_b on the seeds of various wheat varieties the effect of FSh_b on the germination and growth of seedlings of the studied wheat varieties was determined. It was shown that the lower was the percentage of seed germination after exposure to FSh_b, the lower was the proportion of seed endosperm used for germination and growth. Besides, the distribution of the wheat varieties based on the part of endosperm consumed for germination and growth was the same in control and experimental treatments. Thus, the seeds of winter wheat varieties that sparingly use reserve substances for germination and growth retained this ability after exposure to FSh_b. The numerical values of the differences between the «*economical*» and «*less economical*» varieties were higher in FSh_b treatments and for this reason the method can be recommended for a comparative assessment of frost resistance of different winter wheat genotypes.

Keywords: hexaploid wheat seeds, endosperm nutrients, negative temperature shock, frost resistance, express-method.