

**ON THE RELATIONSHIP BETWEEN THE SOWING QUALITIES OF SEEDS AND BIOCHEMICAL INDICATORS OF THE QUALITY OF SPRING WHEAT GRAIN**

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A comprehensive experimental study of Daria wheat grain seed samples (50 samples), differing by year of reproduction and cultivation technology, was carried out. To implement the method of microfocus imaging of wheat seeds a hardware-software complex based on a mobile X-ray diagnostic unit PRDU-02 was used to control the quality of seeds and grains. Determination of the mass fraction of components in wheat grain samples was carried out using traditional laboratory methods in accordance with the requirements of current GOST. Qualities of wheat seeds was evaluated according to GOST 12038-84 with additional morphometry of seedlings (root length, sprout length). A number of correlations between X-ray and biochemical characteristics of grain and their seeding qualities were established. Particularly, correlations between the indices of kernel fatness and sprout length ( $r=-0,77$ ), phosphorus content and sprout length ( $r=-0,69$ ), crude ash and sprout length ( $r=-0,74$ ), roundness of seeds and sprout length ( $r=-0,47$ ), total number of latent defects and sprout length ( $r=-0,38$ ) were established. The developed approach can further serve as an additional tool in express-evaluation of sowing qualities of wheat seeds.

**Key words:** spring soft wheat, wheat seeds, seed sowing qualities, biochemical indices of grain quality, microfocus x-ray, seed image analysis.