

QUALITY OF THE GRAIN OF MACEDONIAN WHEAT GENOTYPE IN DIFFERENT PRODUCTION SYSTEMS

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Abstract

Wheat is one of the most important crops for human consumption. The quality of grain of wheat depend the most on the variety, the external conditions and the applied agro-technical measures.

Based on four years of research (2004/05, 2005/06, 2006/07, 2007/08), highest percentage of protein in grain, in the conventional production, had variety *lizinka* (15.3%) and lowest (13.0%) variety *milenka*. In the organic wheat production, the greatest content of protein in the grain had variety *lizinka* (14.8%) and lowest (12.5%) variety *agrounija prima*. Biggest average sedimentation value of the tested genotypes had variety *podobrena orovcanka* (37.4 mL), but the smallest sedimentation volume had the variety *agrounija prima* (23,8 mL). Most gluten index in conventional wheat production had *altana* (76.21%) and lowest (49.01%) *agrounija prima*. In organic production, the largest percentage of gluten index had variety *orovcanka* (88.78) and lowest (53.87%) variety *mila*.

Of the existing range of wheat genotypes, selected in the Republic of Macedonia, for the mill and food industry, the most stable for getting grain of excellent quality, in conventional production, are varieties *lizinka*, *podobrena orovcanka* and *pelisterka*, while varieties *lizinka*, *orovcanka* and *podobrena orovcanka* are the most stable for grain of good quality in organic production.

Key words: Quality, Grain, Genotypes, Wheat, Conventional, Organic, Production.