

Annotation

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The biological value of spelt wheat protein depending on the variety and line

*The results of the study show the content of basic amino acids in spelt wheat grain according to the origin of the variety and line. The effectiveness ratio of metabolization of essential amino acids and their biological value are given. Glutamic acid is very important which content varies from 3.25 to 4.78% depending on the variety and line. Except it, leucine and proline content is also higher compared to other amino acids and changes from 0.80% in LPP 3117 line to 1.83% in Zoria of Ukraine variety. It is found that the content of essential amino acids varies from 3.81 to 5.55%. Speaking of essential amino acids, spelt wheat protein contains phenylalanine and leucine most of all. Their content in the grain of lines received in the result of hybridization *Tr. aestivum/ Tr. spelta* was by 21–45% less than standard (Zoria of Ukraine). However, the highest content of these amino acids is in the grain of LPP 3124 line (4.38%) and in the grain of LPP 3117 line (3.81%).*

The highest metabolization of essential amino acids is in LPP 3117 line (0.50%) and LPP 3124 line (0.49%). The smallest indicator is in Zoria of Ukraine variety (0.43%) and the rest of the studied varieties and lines is 0.45%. The results show that the effectiveness ratio of metabolization indicates the increase of amino acids in spelt wheat grain due to the replaceable compounds.

It is determined that the limited amino acid proteins in spelt wheat grain are lysine and methionine. Their score varies from 53% to 94% depending on the variety and line. The protein in NSS 6/01 variety, LPP 3124 and LPP 3117 lines is more balanced because the score of other amino acids is deficit-free and the remaining varieties and lines have the deficiency of one or two amino acids, except lysine and methionine.

Key words: *spelt wheat, amino acid, the biological value of protein.*