Effects of organic wheat cultivation in wider rows on the grain yield and quality

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Exact field small-plot trials with winter wheat varieties Ludwig and Sulamit (both the quality group E – elite) in organic farming system in the sugar beet growing region of Central Bohemia were conducted in the years 2005 – 2007 to test the possibility of increasing in the crude protein content in grain and thereby improving of baking quality (row spacing 125, 250 and 375 mm, sowing rates 200, 300 and 400 germinating kernels per m²) under the change of the wheat stand structure. Statistically significant increase of crude protein content in wheat grain dry matter by approximately 0.7 % was found at widening of row spacing from 125 to 250 mm and by about 1.5 % by widening of row spacing from 125 to 375 mm. So, the treatments cultivated in wider row spacing fulfilled the requirement for crude protein content in grain dry matter of bread making wheat for minimum 11.5 %. Increase of values of sedimentation test Zeleny was found at widening of row spacing from 125 to 375 mm, too. Wheat cultivation in wider rows had no negative impact on the grain yield.