



Agricultural Journals

Czech Journal of

FOOD SCIENCE

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Czech J. Food Sci.

Hrušková M., Švec I.: Wheat hardness in

Relation to other quality factors

Czech J. Food Sci., 27 (2009): 240-248

The analysis of the wheat hardness relation to other quality features was done with a set of 281 variety and commercial wheat samples, planted during the years of 2003– 2006 in Central Bohemia and south Moravia areas. Technological quality was evaluated for grain, milling process, and flour analytics with the standard laboratory methods. The grain hardness was measured using NIR spectrophotometer Inframatic 8600. Tukey' s test (ANOVA) of the grain hardness was performed for comparison between the means of wheat variety, wheat origin, crop year, growing locality, and farming intensity. As expected, the grain hardness of wheat varieties belonging to different quality classes was independent of either their classification or winter/spring type. Between all four locality means, the grain hardness among 281 samples differed insignificantly, while in the crops of 2004 and 2006 a provable increase of the kernel compactness was observed. The correlation analysis

confirmed a role of the grain hardness in the milling quality assessment because of the proved correlation with 11 grain and