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Some aspects of wheat quality testing and breeding

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Abstract

Wheat breeding at Selgen started in 1903. Since then more than 50 varieties of winter wheat and more than 20 varieties of spring wheat were released. Wheat acreage in the Czech Republic is about 830000 ha with an average yield of approximately 50 dt.ha^{-1}. Wheat is classified into five quality groups, i.e. E (elite), A (quality bread), B (standard bread), C (nonsuitable breed) and K (biscuit). During selection the following quality traits are considered: specific weight, grain vitreousness, kernel size and color, gluten content, gluten index, protein content, SDS and Zeleny sedimentation value, grain hardness, falling number, alveograph (W, P/L, G), mixograph (14 parameters), farinograph, amylograph, starch content, ash content and fibre content. High rainfall in the second half of July and at the beginning of August caused a significant influence of harvest date on quality traits in 2010. While protein content remained more or less stable, specific weight and falling number showed a significant decrease with later harvest dates. Experiments on the feeding value of wheat revealed a genotypic effect on the live weight of poultry, however, also large growing season and growing site effects were observed. Up to now no reliable rapid tests are available for the selection for feeding value.

Key words

Baking, feeding, quality, *Triticum aestivum*

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