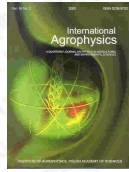


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Comparison of endosperm microstructure of wheat and durum wheat using digital image analysis

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abstract Six wheat varieties were analysed to quantify the relationship between the microstructure and hardness of endosperm. The microstructure of endosperms was characterized using scanning electron microscopy (SEM). Digital image analysis was used to transform the scanned microphotographs and to characterize the image objects. With the DIA algorithms employed for the microstructure quantifications, the grains of different hardness could be differentiated within the variety by analysing the endosperm. The results encourage further studies on wheat grains with improved methods for DIA image acquisition and transformation.

keywords digital image analysis, hardness, fracture resistance, endosperm microstructure, wheat