

International Agrophysics

Polish Journal of Soil Science

Acta Agrophysica

Instytut Agrofizyki

International Agrophysics

General information

Issues

Search



International Agrophysics

publisher: Institute of Agrophysics
Polish Academy of Sciences
Lublin, Poland

ISSN: 0236-8722

vol. 22, nr. 3 (2008)

[previous paper](#) [back to paper's list](#) [next paper](#)

Attempt to application of image processing to evaluation of changes in internal structure of wheat grain*

[\(get PDF\)](#) 

J. Niewczas, W. Woźniak, A. Guc

Institute of Agrophysics, Polish Academy of Sciences, Doświadczalna 4, 20-236
Lublin, P.O. Box 121, Poland

vol. 9 (1995), nr. 4, pp. 343-347

abstract . Test experiments have been carried out concerning the application of computer analysis of X-ray images for the assessment of the changes in inner structure of wheat grain subjected to the process of wetting and then low drying to the initial moisture content. After each stage of the process established, which ensured sufficiently high differentiation in grain moisture content, the images of the same kernels have been registered on X-ray photographic plates. The X-ray images have been entered to the system of computer image analysis using a CCD monochromatic camera. Both kernels images (source and processed) and corresponding distributions of grey levels have been appropriately stored and constituted the basis for further analyses. The computer analysis of X-ray images of wheat grain appeared to be a very subtle tool for the investigation of the changes in grain inner structure. Although it has been possible to notice the differences in grey levels of the images being the results of different level of grain moistening, it has been stated that more careful preparation of the experiment is indispensable. Improvement of X-ray images quality and application of a scanner for image transfer into computer would allow for the elimination of factors which disturb drawing conclusion, which will be accounted for in father investigations.

keywords wheat grain, weray detection, image analysis

Instytut Agrofizyki PAN
ul. Doświadczalna 4
20-290 Lubline-mail: sekretariat@ipan.lublin.pl
tel.: +48817445061
fax.: +48817445067