Registration form

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Mini-symposium:

Preferred presentation mode (<mark>mark your choice</mark>):

      ORAL presentation   ☐

      POSTER presentation   ☐

      Audience on mini- symposium only   ☐

2 ECTS credits are granted for the participation on both days.

Therefore, please register also for the lecture - Bio-Resources and Technologies (970402) in BokuOnline.

Send this form including your abstract by September 17th 2023 to docday-tulln@boku.ac.at

The oral presentation should last 12-15 min followed by 5 min of discussion. Please keep the time!

Posters have to be in A0 format and will be presented with a 2 min pitch during poster walks.

Name Surname

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Email-address

Title of Abstract

Musterman Max[1], Musterfrau Anna[2], Author[3]…

1 Institute, Department, University of Author[1]
2 Institute, Department, University of Author[2]
3 Institute, Department University of Author[3]
…

Abstract text: Font size 11, Font style Calibri; Example see page 3
Max. 300 Words. If you don't follow the abstract rules, your abstract will be printed in pink.

References
(optional – delete if not needed)
[1] Reference1 (optional- delete if not needed)…Text Font size 11, Font style Calibri
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Assessing fusarium damaged kernels
by digital picture analysis

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Fusarium Head Blight (FHB) is a cereal disease that induces important yield losses and contaminates the kernels with mycotoxins[1]. In order to determine the plants resistance level, the more accurate method is to evaluate the mycotoxin content in the kernel samples. The cost of this direct check remains prohibitive. As infected kernels are smaller, shriveled and whiter, another method widely used is to visually estimate the proportion of Fusarium Damaged Kernels (FDK). This method is an easy and efficient way to estimate the mycotoxin content but is time consuming and labor intensive. Digital picture analysis could be a very good option to simplify evaluation. With this new method, pictures are taken with a simple camera in controlled light conditions. We used RGB criteria to segregate the picture´s pixels in 3 categories: Background pixels, Healthy-grain pixels and Diseased-grain pixels. The Whitened Kernel Surface (WKS) is then calculated as the proportion of diseased-grain pixels. We tested this method on 150 infected bead wheat samples and 50 infected triticale samples. We showed a high Pearson correlation between FDK and WKS ($\rho=0.7$ for bread wheat and triticale), and between mycotoxin content and WKS ($\rho=0.85$ for bread wheat and $\rho=0.6$ for triticale). This new notation criterion based on pictures analysis is a promising tool for breeders and researchers. It is as efficient as the traditional visual notation and happens to be faster, easier and more stable. A very economical way to evaluate mycotoxin content and to enable the large scale scoring and ranking needed to select resistant cereal varieties for the future.