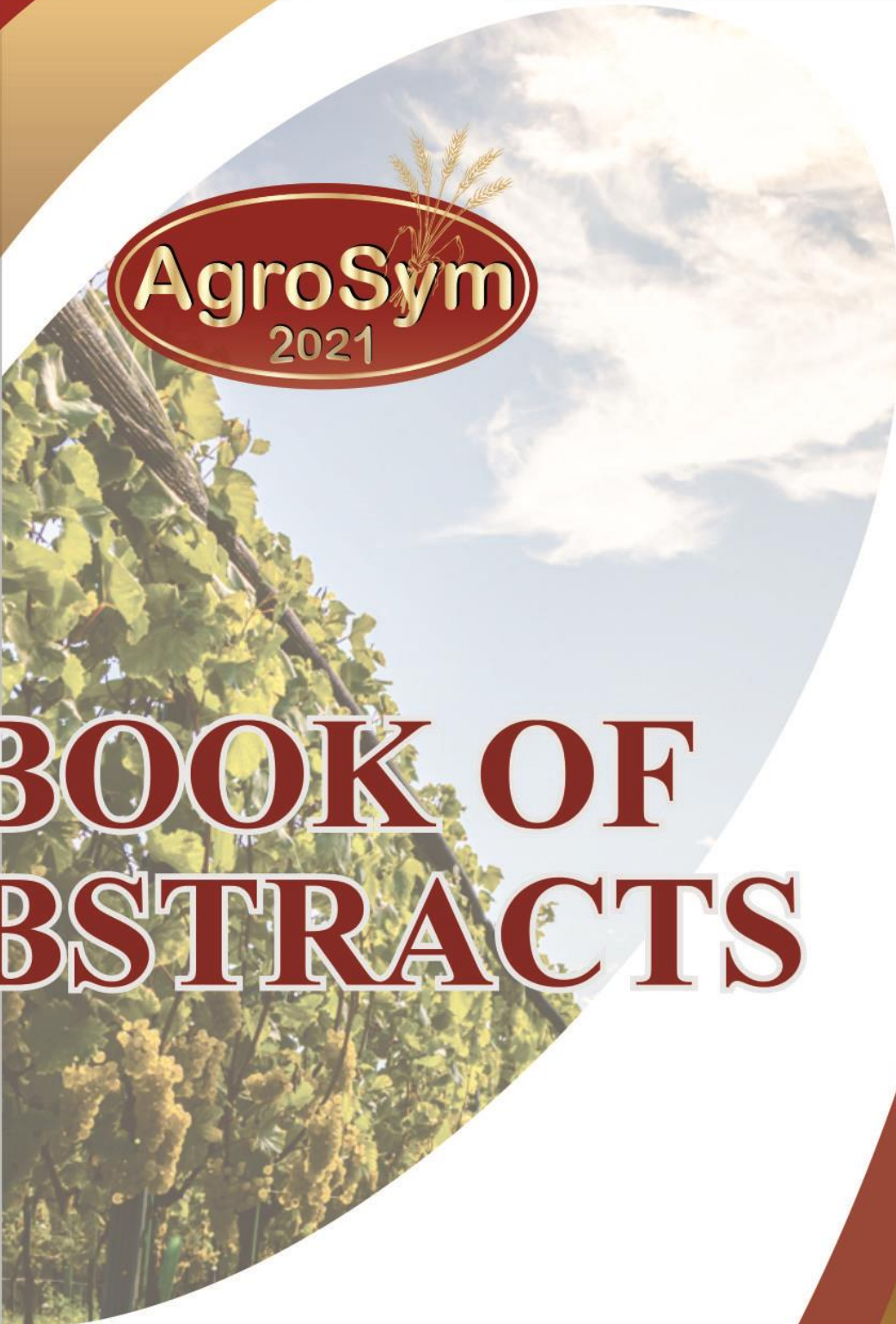




AgroSym
2021



BOOK OF ABSTRACTS

*XII International Scientific
Agriculture Symposium
"AGROSYM 2021"
October 7-10, 2021*



AGRO 2021
sym

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**XII International Scientific Agriculture Symposium
“AGROSYM 2021”**



Jahorina, October 07 - 10, 2021

Impressum

XII International Scientific Agriculture Symposium „AGROSYM 2021“

Book of Abstracts Published by

University of East Sarajevo, Faculty of Agriculture, Republic of Srpska, Bosnia
University of Belgrade, Faculty of Agriculture, Serbia
Mediterranean Agronomic Institute of Bari (CIHEAM - IAMB) Italy
International Society of Environment and Rural Development, Japan
Balkan Environmental Association (B.EN.A), Greece
Centre for Development Research, University of Natural Resources and Life Sciences (BOKU),
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Institute for Animal Science, Ss. Cyril and Methodius University in Skopje, Macedonia
Academy of Engineering Sciences of Serbia, Serbia
Balkan Scientific Association of Agricultural Economics, Serbia
Institute of Agricultural Economics, Serbia

Editor in Chief

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Website:

<http://agrosym.ues.rs.ba>

CIP - Каталогизација у публикацији

Народна и универзитетска библиотека
Републике Српске, Бања Лука

631(048.3)(0.034.4)

INTERNATIONAL Scientific Agricultural Symposium "Agrosym 2021" (12 ;
Jahorina)

Book of Abstracts [Електронски извор] / XII International Scientific
Agriculture Symposium "Agrosym 2021", Jahorina, October 07 - 10, 2021 ;
[editor in chief Dušan Kovačević]. - East Sarajevo = Istočno Sarajevo :
Faculty of Agriculture = Poljoprivredni fakultet, 2021. - 1 електронски
оптички диск (CD-ROM) : текст, слика ; 12 cm

Системски захтеви: Нису наведени. - Насл. са насл. екрана. - Регистар.

ISBN 978-99976-787-8-2

COBISS.RS-ID 134426625

THE OVERVIEW ON THE FUMONISINS PRESENCE IN DURUM WHEAT GRAIN IN SERBIA DURING THE PERIOD 2015-2019

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Abstract

Durum wheat is a cereal with high range of vitamins, minerals and other nutritional compounds which are important in human nutrition. Durum wheat selection programs in Serbia are smaller in scope compared to bread wheat, but this does not diminish their importance. Good grain quality is essential for the grinding and food industry. Therefore, it is important that durum wheat is safe to consume. Fumonisin is a mycotoxin synthesized mainly by fungi of the genus *Fusarium*. These toxins occur usually in maize and maize products, although their presence has also been reported in other cereals such as wheat and barley. In a five years period, 2015-2019, durum wheat samples were tested for the presence of fumonisin. Samples were collected from different plots in the Zemun Polje. Each year, 10 randomly selected durum wheat grain samples were tested. The grains were dried, ground and analyzed for the presence of fumonisin. The analysis was performed by ELISA (Enzyme-linked immunosorbent *assay*) using a kit for fumonisin, Tecna, Italy. The highest concentrations of fumonisin were recorded in 2016 when the values ranged 30.602-43.930 ppm. Medium concentrations (8.872-18.477 ppm) of synthesized fumonisin were recorded in 2015, while in other years (2017, 2018 and 2019) fumonisins were observed in low concentrations (0.024-6.124 ppm). Since previous analyzes have shown that fumonisins are present in durum wheat every year, it is necessary to continue monitoring their appearance in durum wheat, as well as in other small grains.

Key words: *Durum wheat, Fumonisin, Fusarium, Serbia.*