



**INSTITUTE OF AGRICULTURAL ECONOMICS, BELGRADE, SERBIA**

# **SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT IV**

*Book of Abstracts*



**Belgrade, December 2023**

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**International Scientific Conference**

## ***SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT IV***

**BOOK OF ABSTRACTS**

**December, 2023**

**Belgrade, Serbia**

*Publisher:*

**Institute of Agricultural Economics, Belgrade, Serbia**

*Editors:*

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*Technical arrangement and printing:*

**SZR NS MALA KNJIGA +**

**Zetska Street no. 15,**

**21000 Novi Sad, Republic of Serbia,**

**Phone: +381 21 64 00 578**

*Technical preparation and typesetting:*

**Vladimir Sokolović**

*Printing: 200*

**ISBN 978-86-6269-132-3**

**ISBN (e-book) 978-86-6269-133-0**

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*The publisher is not responsible for the content of the abstracts of scientific papers and opinions published in the Book of Abstracts.*

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*Publication of Book of Abstracts was financially supported by the Ministry of Science, Technological Development and Innovation of the Republic of Serbia.*

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## CONTENT:

### PLENARY SECTION I

1. *Andrei Jean Vasile, Luminita Chivu, Mile Vasić, Madalina Ionescu* - **INVESTIGATING SOME POSSIBLE IMPACTS OF ENERGY USE AND PRICES ON AGRICULTURAL SECTOR DEVELOPMENT** . . . . . 1
2. *Francisco J. Matus* - **SOIL CARBON SEQUESTRATION: A NATURE-BASED SOLUTION UNDER OUR FEET - PERSPECTIVE FROM THE CHILEAN VOLCANIC SOILS** . . . 2
3. *Georgiana Raluca Ladaru, Ionut Laurentiu Petre* - **ANALYSIS OF THE COMPETITIVENESS OF THE AGRICULTURAL SECTOR IN TERMS OF COMMERCIAL TRADE, PARALLEL ROMANIA - SERBIA** . . . . . 3
4. *Irina Sashkova, Anna Ivolga* - **ECONOMIC DIVERSIFICATION AS A FACTOR OF SUSTAINABLE RURAL DEVELOPMENT: CASE OF THE STAVROPOL REGION** . . . . . 4
5. *Karoly Bodnar* - **DOMESTIC RABBIT PRODUCTION IN HUNGARY** . . . . . 5
6. *Paun Ion Otiman, Nicoleta Mateoc Sirb, Adrian Gheorghe Banes, Cosmin Salasan, Andrea Feher, Miroslav Raicov, Gabriel Suster* - **INNOVATIVE CIRCULAR SOLUTIONS IN THE HOUSING SECTOR** . . . . . 6
7. *Steliana Rodino* - **ADVANCING BIOECONOMY: A CROSS-COUNTRY PERSPECTIVE ON EUROPE'S SUSTAINABLE FUTURE** . . . . . 7
8. *Vasilii Erokhin, Gao Tianming* - **REVEALING COMPARATIVE ADVANTAGES IN THE CHINA-SERBIA AGRICULTURAL TRADE.** . . . . . 8
9. *Vesna Gantner, Ranko Gantner, Zvonimir Steiner, Boro Krstić, Vera Popović* - **DOES CATTLE PRODUCTION AFFECT GLOBAL WARMING?** . . . . . 9

10. <i>Vili Dragomir</i> - <b>ECONOMIC OPTIMIZATION OF AGRICULTURAL PRODUCTION PROCESSES AS A RESPONSE TO ENVIRONMENTAL CHALLENGES</b> . . . . .	<b>10</b>
--	-----------

**PLENARY SECTION II**

1. <i>Jelena Nestorov Bizonj</i> - <b>AGRICULTURAL COOPERATIVES IN THE FUNCTION OF IMPROVEMENT OF MARKET POSITION OF FARMERS IN VOJVODINA.</b> . . . . .	<b>13</b>
2. <i>Marijana Joksimović</i> - <b>THE INFLUENCE OF FOREIGN DIRECT INVESTMENTS ON THE IMPROVEMENT OF AGRIBUSINESS</b> . . . . .	<b>14</b>
3. <i>Nenad Trkulja</i> - <b>MULTI-RESISTANCE OF CERCOSPORA BETICOLA TO MBC, DMI AND QoI FUNGICIDES AND IMPACT ON MANAGMENT</b> . . . . .	<b>15</b>
4. <i>Radivoj Prodanović, Dragan Ivanišević</i> - <b>ADDING VALUE IN SHEEP FARMING THROUGH THE DEVELOPMENT OF ALTERNATIVE PRODUCTS</b> . . . . .	<b>16</b>
5. <i>Sanjin Ivanović, Saša Todorović</i> - <b>NEW APPROACHES TO INVESTMENT DECISIONS ON AGRICULTURAL HOLDINGS</b> . . . . .	<b>17</b>
6. <i>Snežana Cico, Ljiljana Rajnović</i> - <b>SOCIALLY RESPONSIBLE STATE BUSINESS AND AGRICULTURAL LAND RESTITUTION PROCEDURE</b> . . . . .	<b>18</b>
7. <i>Sonja Đuričin</i> - <b>IMPACT OF RESEARCH AND DEVELOPMENT INVESTMENT ON MEDIUM-SIZED AGRICULTURAL ENTERPRISES' BUSINESS SUCCESS IN SERBIA</b> . . . . .	<b>19</b>
8. <i>Vedran Tomić, Robert Radišić</i> - <b>ECONOMIC ASPECTS OF MILK PRODUCTION AND COTTAGE CHEESE AS A TRADITIONAL DAIRY PRODUCT ON FAMILY FARMS IN SERBIA</b> . . . . .	<b>20</b>



## I SECTION – AGRIBUSINESS

1. *Aleksandar Miljatović, Veljko Vukoje, Veljko Šarac* - **THE ECONOMIC CHARACTERISTICS OF AGRICULTURAL HOLDINGS IN THE REPUBLIC OF SERBIA** . . . . . **.23**
2. *Ana Ursu* - **TECHNO-ECONOMIC MODELS FOR ANALYSIS AND OPTIMIZATION OF ECONOMIC PROCESSES IN AGRICULTURE** . . . . . **.24**
3. *Bianca Florentina Nistoroiu, Stefan Laurentiu Prahoveanu, Sergej Vasić* - **A SUMMERY ANALYSIS OF SUSTAINABLE FAMILY FARMING IN THE EUROPEAN UNION** . . . . . **.25**
4. *Blagica Sekovska, Vasilka Poposka Trenevka* - **NEGATIVE TRENDS IN AGRICULTURAL LAND MANAGEMENT POLICY IN GENERAL WITH SPECIAL REFERENCE TO MACEDONIA** . . . . . **.26**
5. *Gheorghe Dan Isbășoiu, Dana Volosevici* - **NON-STANDARD FORMS OF EMPLOYMENT IN THE ROMANIAN AGRICULTURE** . . . **.27**
6. *Jovana Dedić, Radovan Pejanović, Jelica Eremić Dođić* - **TAX ASPECT OF THE ACCOUNTING OF PERENNIAL PLANTINGS**. . . . . **.28**
7. *Marko Jeločnik, Lana Nastić, Božo Ilić* - **INVESTMENT IN CREATING THE VALUE ADDED IN LIVESTOCK PRODUCTION** . . . . . **.29**
8. *Miroslav Nedeljković, Milorad Đokić, Velibor Potrebić* - **SELECTION OF SUSTAINABLE SUPPLIERS IN AGRICULTURAL ENTERPRISES** . . . . . **.30**
9. *Silviu Beciu, Georgiana Armenița Arghiroiu, Maria Bobeică Colpoș* - **STUDY ABOUT EVOLUTION OF THE ROMANIAN OILSEED MARKET AND ROMANIAN PLACE IN THE INTERNATIONAL TRADE WITH OILSEED**. . . . . **.31**
10. *Steliana Mocanu, Ionut Laurentiu Petre, Marilena E. Potârniche Berheci* - **ANALYSIS OF CEREAL FOREIGN TRADE IN EUROPEAN UNION** . . . . . **.32**

11. *Simona Cosmina Toader, Ioan Brad, Ciprian Ioan Rujescu, Monica Ocnean, Jakub Skorupa* - **AGRIBUSINESS IN TERMS OF EDUCATIONAL OFFER AND EMPLOYMENT OPPORTUNITIES: STUDY CASE ROMANIA** . . . . . **33**
12. *Vesna Paraušić, Bojana Bekić Šarić, Jasna Babić* - **THE GLOBAL G.A.P. CERTIFICATION SCHEME IN SERBIAN AGRICULTURE: CONSULTANTS' ATTITUDES** . . . . . **34**
13. *Violeta Sima, Ileana Georgiana Gheorghe* - **AN OVERVIEW OF THE EUROPEAN UNION WINE SECTOR DYNAMICS: AN EMPIRICAL ANALYSIS FROM THE ROMANIAN PERSPECTIVE.** . . . . . **35**
14. *Vlado Kovacević* - **ANALYSIS OF AGRICULTURAL POLICY DEVELOPMENTS IN SERBIA** . . . . . **36**
15. *Zoran Simonović, Biljana Ilić* - **COMPLEX BUSINESS SYSTEM MANAGEMENT IN AN AGRO-INDUSTRIAL COMPLEX** . . . **37**

## II SECTION - BIOTECHNOLOGY

1. *Angel Sarov, Ekaterina Tzvetanova* - **ECONOMIC EFFECTIVENESS OF APPLICATION OF BIOSTIMULATORS IN SPRING OATS** .41
2. *Georgi Georgiev* - **TESTING THE EFFECT OF AN INNOVATIVE PRODUCT OF THE COMPANY HUMATE ROST FOR VEGETATIVE FOLIAR NUTRITION ON THE DEVELOPMENT OF OIL SUNFLOWER (HELIANTHUS ANNUUS L.) UNDER THE CONDITIONS OF DOBRUDJA.** . . . . . **42**
3. *Gordana Tamindžić, Sergej Azizbekian, Srđan Zec, Slobodan Vlajić, Dragana Milošević, Dragana Miljaković, Maja Ignjatov* - **FOLIAR APPLICATION OF NANOFERTILIZER IMPROVES SEED QUALITY PERFORMANCE OF TOMATO (SOLANUM LYCOPERSICUM L.).** . . . . . **43**
4. *Iliyana Petrova, Svetlana Stoyanova, Ralitzia Mincheva* - **EFFECT OF FOLIAR TREATMENTS WITH BIOSTIMULANTS IN SPRING OILSEED RAPE CULTIVATION** . . . . . **45**

5. *Irina Marina, Biljana Grujić Vučkovski, Marijana Jovanović Todorović* - **IMPACT OF INTENSIVE AGRICULTURAL PRODUCTION ON THE ENVIRONMENT** . . . . . **46**
6. *Maja Ignjatov, Dragana Milošević, Janko Červenski, Slobodan Vlajić, Boris Adamović, Snežana Jakšić, Đorđe Vojnović* - **HEALTHY SOIL - HEALTHY PLANT: CONTAMINATED SOIL AS A SOURCE OF INOCULUM OF *FUSARIUM VERTICILLIOIDES* (SACC.) NIRENBERG** . . . . . **47**
7. *Marina Đorović, Radojica Rakić, Jela Ikanović, Vera Popović, Zdravka Petković, Dragana Popović, Ljubiša Kolarić* - **SPANISH REED IN THE FUNCTION OF RENEWABLE ENERGY SOURCES AND CIRCULAR ECONOMY** . . . . . **49**
8. *Nada Mijajlović, Nataša Papić Blagojević, Đorđe Mihailović* - **BEEKEEPING AND HONEY PRODUCTION IN SERBIA IN THE CONTEXT OF SUSTAINABLE RURAL DEVELOPMENT.** . . . . . **50**
9. *Nataša Kljajić, Jonel Subić, Predrag Vuković* - **NATURAL CHARACTERISTICS AS A BASE FOR THE SUSTAINABLE AGRICULTURAL PRODUCTION – THE MUNICIPALITY OF TEMERIN EXAMPLE** . . . . . **51**
10. *Ranko Gantner, Igor DelVechio, Zvonimir Steiner, Bishal K. Sitaula, Krešimir Bošnjak, Vesna Gantner* - **MAIZE GRAIN YIELD IN ANIMAL-POWERED FARMING AS AFFECTED BY SOIL FERTILIZATION VARIANT: RESULTS FROM THE 2023 SEASON IN NORTH-EAST CROATIA.** . . . . . **52**
11. *Slavica Arsić, Ivan Bošnjak, Anton Puškarić* - **PRODUCTS OBTAINED FROM MILK PROCESSING WITH SPECIAL REFERENCE TO WHEY PRODUCTION IN CHEESE PRODUCTION** . . . . . **53**
12. *Tatjana Dimitrijević, Mihailo Ratknić* - **VALUES OF ECOSYSTEM SERVICES - CARBON STORAGE IN THE FOREST ECOSYSTEMS OF BELGRADE** . . . . . **54**
13. *Tina Lešnik, Andreja Borec* - **THE INFLUENCE OF THE ORIENTATION AND TYPE OF HEDGEROWS ON SHADING PERCENTAGE OF AGRICULTURAL LAND** . . . . . **55**

14. *Vera Popović, Marijana Jovanović Todorović, Vesna Gantner, Vera Rajičić, Vladimir Filipović, Dragan Dokić, Gordana Dozet* - **STATE OF ORGANIC PRODUCTION IN WORLD AND FOR US . . . . .56**
15. *Vesna Gantner, Vera Popović, Zvonimir Steiner, Ranko Gantner, Klemen Potočnik* - **THE DIFFERENCES IN SUBCLINICAL MASTITIS PREVALENCE AND EFFECT ON MILK PRODUCTION DUE TO COWS' BREED AND BREEDING REGION . . . . .58**
16. *Vladimir Miladinović, Vladan Ugrenović, Mira Milinković* - **PHYTOREMEDIATION AND ELECTROKINETIC SOIL REMEDIATION . . . . .60**
17. *Zoranka Malešević, Đorđe Ilić, Mirjana Jovović* - **POSSIBILITY OF BIOLOGICAL RECLAMATION OF DEGRADED SOIL IN THE DUMPS OF THE PLJEVLJA MINE . . . . .61**
18. *Zvonimir Steiner, Ivan Babić, Vesna Gantner, Ranko Gantner* - **EFFECT OF MILK REPLACEMENT ON GROWTH, NUTRITION COEFFICIENT AND OTHER RELEVANT PARAMETERS IN DAIRY CALVES . . . . .62**

### **III SECTION – REVITALIZATION OF RURAL AREAS**

1. *Aleksandra Vujko, Radmila Bojović, Miroslav Knežević* - **RURAL TOURISM IN THE FUNCTION OF SERBIAN AND EU TOURISM DEVELOPMENT . . . . . 65**
2. *Aliyu Mansur Sulaiman, Mustapha Umar, Jimoh Abdulrauf Kayode, Rafiu Olalekan Yusuf, Miroslav P. Popović* - **SOCIOECONOMIC EFFECTS OF CATTLE RUSTLING ON THE LIVELIHOOD OF INHABITANTS OF SOME SELECTED RURAL COMMUNITIES IN NORTHERN NIGERIA . . . . . 66**
3. *Andreea Roxana Firăţoiu, Liviu Mărcuţă, Elena Soare, Irina Adriana Chiurciu* - **THE CONTRIBUTION OF TOURISM TO THE DEVELOPMENT OF THE RURAL AREA IN ILFOV COUNTY: CASE STUDY FOR BUFTEA AREA . . . . . 67**
4. *Daniela Nicoleta Voicila, Diana Maria Ilie* - **BIBLIOMETRIC ANALYSIS: QUALITY OF LIFE IN RURAL AREA . . . . . 68**

5.	<i>Gordana Radović, Radovan Pejanović, Zorica Vasiljević -</i> <b>FINANCING THE DEVELOPMENT OF RURAL TOURISM IN SERBIA FROM THE IPARD II PROGRAM. . . . .</b>	<b>69</b>
6.	<i>Lela Ristić, Petar Veselinović, Danijela Despotović –</i> <b>GLOBAL TRENDS AND OUTLOOKS IN AGRICULTURAL DEVELOPMENT AND FOOD SECURITY . . . . .</b>	<b>70</b>
7.	<i>Marija Gjosheva Kovachevikj, Jorde Jakjimoski, Lazo Dimitrov, Despina Popovska Stojanov -</i> <b>REGIONAL DISPARITIES RELATED TO SOCIOECONOMIC DETERMINANTS OF AGRICULTURE AND RURAL DEVELOPMENT IN NORTH MACEDONIA. . . . .</b>	<b>71</b>
8.	<i>Marija Indin -</i> <b>CHALLENGES OF THE GREEN TRANSITION IN RURAL AREAS. . . . .</b>	<b>72</b>
9.	<i>Marija Popović, Sreten Jelić -</i> <b>SOCIO-DEMOGRAPHIC CHARACTERISTICS OF SERBIAN HOUSEHOLDS AND SUSTAINABLE DEVELOPMENT . . . . .</b>	<b>73</b>
10.	<i>Radmila Jovanović, Claudete Oliveira Moreira, Debajit Datta</i> <b>- OBSERVING CHANGES OF SETTLEMENT SIZE IN VITICULTURAL ZONES OF SERBIA USING VIIRS NIGHTTIME LIGHT DATA . . . . .</b>	<b>74</b>
11.	<i>Sara Stanić Jovanović, Dragana Vuković, Nevena Miletović -</i> <b>DEVELOPMENT OF SPECIAL FORMS OF TOURISM WITH THE AIM TO REVITALIZE THE RURAL AREA OF PLJEVLJA MUNICIPALITY . . . . .</b>	<b>75</b>
12.	<i>Snežana Milićević, Nataša Đorđević, Marija Mandarić -</i> <b>RURAL TOURISM: EMPOWERING RURAL DEVELOPMENT . . .</b>	<b>76</b>
13.	<i>Suzana Lazović, Drago Cvijanović -</i> <b>REVITALIZATION OF RURAL AREAS THROUGH THE APPLICATION OF THE “SMART VILLAGE” CONCEPT. . . . .</b>	<b>77</b>

#### **IV SECTION – DIGITALIZATION IN AGRICULTURE**

1.	<i>Branko Mihailović, Vesna Popović, Katica Radosavljević -</i> <b>INDOOR SMART GARDEN AS A FACTOR OF SUSTAINABLE DEVELOPMENT IN AGRICULTURE. . . . .</b>	<b>81</b>
----	--	-----------



2.	<i>Cosmin Salasan, Carmen Simona Dumitrescu, Iasmina Iosim, Cosmina Toader</i> - <b>DIGITAL LITERACY AND USE OF DIGITAL TECHNOLOGIES BY SMALL FARMERS IN SOUTHEASTERN EUROPE</b> . . . . .	82
3.	<i>Ferhat Čejvanović, Adnan Kamerić</i> - <b>THE ECONOMIC SIGNIFICANCE OF DIGITIZATION IN AGRIBUSINESS</b> . . . . .	83
4.	<i>Katarina Stojanović, Radovan Pejanović</i> - <b>URBAN AGRICULTURE, IMPLEMENTATION POSSIBILITIES IN THE BUILT ENVIRONMENT AND SMART CITY</b> . . . . .	84
5.	<i>Mirjana Dejanović, Sanja Popović Pantić, Ana Kovačević</i> - <b>THE SIGNIFICANCE OF DIGITAL TRANSFORMATION IN AGRICULTURE FOR SUSTAINABLE DEVELOPMENT.</b> . . . .	85
6.	<i>Nedeljko Prdić, Boris Kuzman, Sara Kostić</i> - <b>DIGITALIZATION OF THE SALE OF AGRICULTURAL PRODUCTS AS A CHALLENGE TO THE CRISIS</b> . . . . .	86
7.	<i>Olgica Zečević Stanojević, Dragan Nedeljković, Leposava Zečević, Boris Stanojević</i> - <b>SIGNIFICANCE OF INNOVATIONS AND APPLICATION OF INFORMATION - COMMUNICATION TECHNOLOGIES IN AGRICULTURE AND RURAL DEVELOPMENT OF SERBIA</b> . . . . .	87
8.	<i>Sladčan Stanković, Vedran Tomić, Cosmin Salasan</i> - <b>PERSPECTIVES OF DIGITAL TOOLS IN THE AGRICULTURAL ADVISORY WORK.</b> . . . . .	88
9.	<i>Tina Bobić, Maja Gregić, Pero Mijić, Vesna Gantner</i> - <b>INFORMATION AND COMMUNICATION TECHNOLOGYS IN CATTLE LAMENESS DETECTION.</b> . . . . .	89
10.	<i>Vladimir Pejanović, Boris Stanojević, Gordana Radović</i> - <b>NEW TECHNOLOGIES IN AGRICULTURE AND SMART VILLAGES</b> . . . . .	90

# SPANISH REED IN THE FUNCTION OF RENEWABLE ENERGY SOURCES AND CIRCULAR ECONOMY

*Marina Đorović<sup>1</sup>, Radojica Rakić<sup>2</sup>, Jela Ikanović<sup>3</sup>, Vera Popović<sup>4</sup>,  
Zdravka Petković<sup>5</sup>, Dragana Popović<sup>6</sup>, Ljubiša Kolarić<sup>7</sup>*

## Abstract

*In order to ensure security in the supply of necessary energy sources, most countries in the world direct their research in the direction of finding the most rational way of using renewable energy sources and the circular economy. The paper analyzed the Spanish reed as a significant source of all forms of energy, from biogas, to solid biofuels and vegetable coal, and as an alternative source of plant fibers. The separated cellulose is most often used for paper production, but also in the textile industry, as a substitute for cotton, flax and kenaf fibers. The fact that Spanish cane can be cultivated and in marginal agro-ecological conditions provides us with opportunities to establish perennial grass areas on unused and degraded areas.*

*Thanks to the development of new technologies for the processing of biological waste into energy through the circular economy, the rate of increase in the use of alternative fuels is growing significantly, and Spanish cane, thanks to its modest requirements for water and heat, can be classified as a desirable energy crop. Spanish reed is one of the best crops for soil protection against all types of erosion, then for phytoremediation, absorption of harmful gases from the atmosphere, and it is valued in the construction industry and as an ornamental plant.*

**Key words:** *Renewable energy sources, circular economy, Spanish cane as energy crop, biofuel and biogas, phytoremediation.*

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CIP - Каталогизација у публикацији  
Народна библиотека Србије, Београд

631:502.121.1(048)

005.591.6:631(048)

338.432(048)

INTERNATIONAL scientific conference Sustainable agriculture and rural development (4 ; 2023 ; Beograd)

Book of abstracts / IV international scientific conference Sustainable agriculture and rural development, December, 2022 Belgrade ; [organizers] Institute of Agricultural Economics ... [et al.] ; [editors Jonel Subić ... [et al.]]. - Belgrade : Institute of Agricultural Economics, 2023 (Novi Sad : NS Mala knjiga +). - XIX, 90 str. ; 24 cm

Tiraž 200. - Str. XIX: Preface / editors.

ISBN 978-86-6269-132-3

1. Subić, Jonel, 1964- [уредник]

а) Пољопривреда -- Научно-технолошки развој -- Апстракти б) Пољопривреда -- Економски аспект -- Апстракти в) Пољопривреда -- Одрживи развој -- Апстракти г) Пољопривредна производња -- Апстракти д) Рурални развој -- Апстракти

COBISS.SR-ID 132365577

