



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

# **SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT IV**

*Book of Abstracts*



**Belgrade, December 2023**

# **INSTITUTE OF AGRICULTURAL ECONOMICS BELGRADE**

**Volgina Street no. 15, 11060 Belgrade, Serbia**

**Phone/Fax: +381 (0) 11 69 72 858**

**Phone: +381 (0) 11 69 72 848**



**E-mail:**

**[office@iep.bg.ac.rs](mailto:office@iep.bg.ac.rs)**

**Internet address:**

**[www.iep.bg.ac.rs](http://www.iep.bg.ac.rs)**

**International Scientific Conference**

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

**BOOK OF ABSTRACTS**

**December, 2023**

**Belgrade, Serbia**

*Publisher:*

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

*Editors:*

**Jonel Subić, Ph.D.**

**Miroslav Nedeljković, Ph.D.**

**Marijana Jovanović Todorović, Ph.D.**

**Jean Vasile Andrei, Ph.D.**

*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**

---

---

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

*They represent the authors' point of view.*

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

## *Organizers*

---

INSTITUTE OF AGRICULTURAL ECONOMICS, BELGRADE - SERBIA

## *Co-organizers*

---

NATIONAL TEAM FOR THE REVIVAL OF SERBIAN VILLAGES, BELGRADE - SERBIA

CHAMBER OF COMMERCE AND INDUSTRY OF SERBIA, BELGRADE - SERBIA

COUNCIL FOR SMART AGRICULTURE - CHAMBER OF COMMERCE AND INDUSTRY OF BELGRADE, BELGRADE - SERBIA

ACADEMY OF ENGINEERING SCIENCES OF SERBIA, DEPARTMENT OF BIOTECHNOLOGICAL SCIENCES, BELGRADE - SERBIA

FACULTY OF AGRICULTURE, BELGRADE - SERBIA

FACULTY OF AGRICULTURE, NOVI SAD - SERBIA

FACULTY OF AGRICULTURE, KRUŠEVAC - SERBIA

FACULTY OF ECONOMICS, BELGRADE - SERBIA

FACULTY OF ECONOMICS, SUBOTICA - SERBIA

FACULTY OF ECONOMICS, KRAGUJEVAC - SERBIA

FACULTY OF ECONOMICS, KOSOVSKA MITROVICA - SERBIA

FACULTY OF HOTEL MANAGEMENT AND TOURISM, UNIVERSITY OF KRAGUJEVAC, VRNJAČKA BANJA - SERBIA

FACULTY OF APPLIED MANAGEMENT, ECONOMICS AND FINANCE (MEF), BELGRADE - SERBIA

FACULTY OF ECONOMICS AND ENGINEERING MANAGEMENT, UNIVERSITY BUSINESS ACADEMY, NOVI SAD - SERBIA

FACULTY FOR BIOFARMING, MEGATREND UNIVERSITY, BAČKA TOPOLA - SERBIA

FACULTY OF AGRONOMY IN ČAČAK, UNIVERSITY OF KRAGUJEVAC, ČAČAK - SERBIA

EUROPEAN UNIVERSITY, BELGRADE - SERBIA

UNIVERSITY "ALFA BK", BELGRADE - SERBIA

UNIVERSITY "SINGIDUNUM", BELGRADE - SERBIA

UNIVERSITY "UNION - NIKOLA TESLA", BELGRADE - SERBIA

UNIVERSITY "EDUCONS", NOVI SAD - SERBIA

INSTITUTE "MIHAJLO PUPIN", BELGRADE - SERBIA

INSTITUTE OF ECONOMIC SCIENCES, BELGRADE - SERBIA

INSTITUTE FOR SCIENCE APPLICATION IN AGRICULTURE, BELGRADE - SERBIA

INSTITUTE OF FORESTRY, BELGRADE - SERBIA

INSTITUTE OF FIELD AND VEGETABLE CROPS, NOVI SAD - SERBIA

INSTITUTE FOR BIOLOGICAL RESEARCH "SINIŠA STANKOVIĆ", BELGRADE - SERBIA

INSTITUTE FOR PLANT AND ENVIRONMENT PROTECTION, BELGRADE - SERBIA

MAIZE RESEARCH INSTITUTE ZEMUN POLJE, BELGRADE - SERBIA

FRUIT RESEARCH INSTITUTE, ČAČAK - SERBIA

INSTITUTE FOR VEGETABLE CROPS, SMEDEREVSKA PALANKA - SERBIA  
INSTITUTE OF INFORMATION TECHNOLOGIES, KRAGUJEVAC - SERBIA  
INSTITUTE FOR SOIL SCIENCE, BELGRADE - SERBIA  
INSTITUTE FOR FORAGE CROPS, KRUŠEVAC - SERBIA  
NOVI SAD BUSINESS SCHOOL, NOVI SAD - SERBIA  
ACADEMY OF VOCATIONAL STUDIES IN ŠUMADIJA, ARANĐELOVAC DEPARTMENT,  
ARANĐELOVAC - SERBIA  
ASSOCIATION OF THE ECONOMIST OF BELGRADE, BELGRADE - SERBIA  
DEVELOPMENT ACADEMY OF SERBIAN AGRICULTURE (RAPS), BELGRADE - SERBIA  
BALKAN SCIENTIFIC ASSOCIATION OF AGRICULTURAL ECONOMISTS, BELGRADE  
- SERBIA  
SERBIAN ASSOCIATION OF AGRICULTURAL ECONOMISTS (DAES), BELGRADE -  
SERBIA  
COOPERATIVE UNION OF SERBIA, BELGRADE - SERBIA  
COOPERATIVE UNION OF VOJVODINA, NOVI SAD - SERBIA  
AGRICULTURAL CHEMICAL HIGH SCHOOL IN OBRENOVAC, BELGRADE - SERBIA  
FACULTY OF AGRO-FOOD AND ENVIRONMENTAL ECONOMICS, BUCHAERST  
UNIVERSITY OF ECONOMIC STUDIES, BUCHAREST - ROMANIA  
CENTER FOR STUDY AND RESEARCH FOR AGROFORESTRY BIODIVERSITY,  
BUCHAREST - ROMANIA  
NATIONAL INSTITUTE FOR ECONOMIC RESEARCH “COSTIN C. KIRITESCU”,  
ROMANIAN ACADEMY, BUCHAREST - ROMANIA  
UNIVERSITY OF AGRONOMIC SCIENCES AND VETERINARY MEDICINE OF  
BUCHAREST (USAMV), BUCHAREST - ROMANIA  
RESEARCH CENTRE FOR SUSTAINABLE RURAL DEVELOPMENT OF ROMANIA,  
ROMANIAN ACADEMY, TIMISOARA - ROMANIA  
FACULTY OF MANAGEMENT AND RURAL TOURISM, UNIVERSITY OF LIFE SCIENCES  
“KING MIHAI I”, TIMISOARA - ROMANIA  
UNIVERSITY OF BJELJINA, BJELJINA - BOSNIA AND HERZEGOVINA  
FEDERAL INSTITUTE OF AGRICULTURAL ECONOMICS, RURAL AND MOUNTAIN  
RESEARCH, VIENNA - AUSTRIA  
INSTITUTE OF AGRICULTURAL ECONOMICS, SOFIA - BULGARIA  
NATIONAL INSTITUTE FOR ECONOMIC RESEARCH, CHISINAU - MOLDOVA  
INSTITUTE OF AGRICULTURAL ECONOMICS, BUCHAREST - ROMANIA  
THE RESEARCH INSTITUTE FOR AGRICULTURE ECONOMY AND RURAL  
DEVELOPMENT (ICEADR), BUCHAREST - ROMANIA  
BALKAN ENVIRONMENTAL ASSOCIATION (B.EN.A.), THESSALONIKI - GREECE  
RESEARCH NETWORK ON RESOURCES ECONOMICS AND BIOECONOMY (RebResNet),  
PLOIESTI – ROMANIA  
DIGITAL ECONOMY RESEARCH CENTER, CHONGQING INSTITUTE OF HIT,  
CHONGQING - CHINA  
STAVROPOL STATE AGRARIAN UNIVERSITY, STAVROPOL – RUSSIAN FEDERATION

## HONORARY BOARD

---

- *Jelena Begović*, Ph.D., Minister of Science, Technological Development and Innovation of the Republic of Serbia.
- *Jelena Tanasković*, Minister of Agriculture, Forestry and Water Management of the Republic of Serbia.
- *Milan Krkobabić*, Minister of Rural Welfare, Co-president of the National Team for the Survival of Serbian Villages.
- Academician *Dragan Škorić*, Ph.D., President of the Academic Committee for the Village of the Serbian Academy of Sciences and Arts (SANU), Co-president of the National Team for the Revival of Serbian Villages, Belgrade - Serbia.
- Academician *Ion Paun Otiman*, Ph.D., Honorary President of the Romanian Academy, Timisoara Branch, Timisoara - Romania.
- Prof. *Nicolae Istudor*, Ph.D., Rector of the Bucharest University of Economic Studies, Bucharest - Romania.
- Prof. *Alexandru Stratan*, Ph.D., Rector, National Institute for Economic Research, Chisinau - Moldova.
- Prof. *Vladimir Simikov*, Ph.D., Rector of the Stavropol State Agrarian University, Stavropol - Russian Federation.
- *Marko Čadež*, President of the Chamber of Commerce and Industry of Serbia, Belgrade - Serbia.
- Prof. *Miroslav Trajanović*, Ph.D., State Secretary in the Ministry of Science, Technological Development and Innovation of Republic Serbia.
- *Vukašin Grozdić*, Ph.Ds., State Secretary in the Ministry of Science, Technological Development and Innovation of Republic Serbia.
- *Marina Soković*, Ph.D., Assistant Minister in the Ministry of Science, Technological Development and Innovation of the Republic of Serbia.
- *Vladimir Radovanović*, M.Sc., Assistant Minister in the Ministry of Science, Technological Development and Innovation of the Republic of Serbia.
- *Vedrana Ilić*, Assistant Minister in the Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia.
- *Aleksandar Bogičević*, Assistant Minister in the Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia.
- Prof. *Zorica Vasiljević*, Ph.D., President of Steering committee of IAE, Belgrade - Serbia.
- Prof. *Aleksandar Rodić*, Ph.D., Member of Steering committee of IAE and Head of Robotics Department, Institute „Mihailo Pupin“, Belgrade - Serbia.
- Prof. *Zora Dajić Stevanović*, Ph.D., Member of Steering committee of IAE and Professor at the Faculty of Agriculture, Belgrade – Serbia.
- *Maja Ignjatov*, Ph.D., Member of Steering committee of IAE and Researcher at the Institute of Field and Vegetable Crops, Novi Sad - Serbia.
- Prof. *Snežana Janković*, Ph.D., Council for Smart Agriculture - Chamber of Commerce and Industry of Belgrade, Belgrade - Serbia.
- Prof. *Mirjana Šijaić Nikolić*, Ph.D., Head of Department of Biotechnological Sciences, Academy of Engineering Sciences of Serbia, Belgrade - Serbia.
- Prof. *Tomo Milošević*, Ph.D., Dean of Faculty of Agronomy, Čačak - Serbia.

- Prof. *Snežana Bogosavljević Bošković*, Ph.D., Faculty of Agronomy, Čačak - Serbia.
- Prof. *Nedeljko Tica*, Ph.D., Dean of the Faculty of Agriculture, Novi Sad - Serbia.
- Prof. *Dušan Živković*, Ph.D., Dean of the Faculty of Agriculture, Belgrade - Serbia.
- Prof. *Ivan Filipović*, Ph.D., Dean of the Faculty of Agriculture, Kruševac - Serbia.
- Prof. *Žaklina Stojanović*, Ph.D., Dean of the Faculty of Economics, Belgrade - Serbia.
- Prof. *Milena Jakšić*, Ph.D., Dean of the Faculty of Economics, Kragujevac - Serbia.
- Prof. *Nebojša Gvozdrenović*, Ph.D., Dean of the Faculty of Economics, Subotica - Serbia.
- Prof. *Drago Cvijanović*, Ph.D., Dean of the Faculty of Hotel Management and Tourism, University of Kragujevac, Vrnjačka Banja - Serbia.
- Prof. *Aleksandar Andrejević*, Ph.D., Rector of the University „EDUCONS“, Novi Sad - Serbia.
- Prof. *Gorica Cvijanović*, Ph.D., Dean of the Faculty for Bio-farming, Megatrend University, Bačka Topola - Serbia.
- Prof. *Tatjana Brankov*, Ph.D., President of Serbian Association of Agricultural Economists, Belgrade - Serbia.
- Prof. *Dragan Soleša*, Ph.D., Rector of the University Business Academy, Novi Sad - Serbia.
- Prof. *Maja Ćuk*, Ph.D., Rector of the University ”Alfa BK”, Belgrade - Serbia.
- Prof. *Goranka Knežević*, Ph.D., Rector of the University “Singidunum”, Belgrade - Serbia.
- Prof. *Nebojša Zakić*, Ph.D., Rector of the University „Union - Nikola Tesla“, Belgrade - Serbia.
- Prof. *Tomislav Brzaković*, Ph.D., Dean of the Faculty of Applied Management, Economics and Finance, Belgrade - Serbia.
- Prof. *Marko Carić*, Ph.D., Dean, Faculty of Economics and Engineering Management, University Business Academy, Novi Sad - Serbia.
- Prof. *Milija Zečević*, Ph.D., Rector, European University, Belgrade - Serbia.
- Prof. *Nikola Milićević*, Ph.D., Faculty of Economics, Subotica - Serbia.
- Prof. *Nikola Tomašević*, Ph.D., Director, Institute Mihajlo Pupin, Belgrade - Serbia.
- *Jovan Zubović*, Ph.D., Director, Institute of Economic Sciences, Belgrade - Serbia.
- *Rade Jovanović*, Ph.D., Director, Institute for Appliance of Science in Agriculture, Belgrade - Serbia.
- *Miodrag Tolimir*, Ph.D., Director, Maize Institute “Zemun Polje”, Belgrade - Serbia.
- *Mirjana Mihailović*, Ph.D., Director of Institute for Biological Research “Siniša Stanković”, Belgrade - Serbia
- *Ljubinko Rakonjac*, Ph.D., Director, Institute of Forestry, Belgrade - Serbia.
- Prof. *Jegor Miladinović*, Ph.D., Director, Institute of Field and Vegetable Crops, Novi Sad - Serbia.
- *Darko Jevremović*, Ph.D., Director, Fruit Research Institute, Čačak - Serbia.
- Prof. *Nenad Đurić*, Ph.D., Director, Institute for Vegetable Crops, Smederevska Palanka - Serbia.
- *Nenad Trkulja*, Ph.D., Director, Institute for Plant and Environmental Protection, Belgrade - Serbia.
- Prof. *Đorđe Mihailović*, Ph.D., Academy of Vocational Studies in Šumadija, Aranđelovac - Serbia.
- *Igor Saveljić*, Ph.D., Director, Institute of Information Technologies, Kragujevac - Serbia.
- *Mira Milinković*, Ph.D., Director, Institute for Soil, Belgrade - Serbia.
- *Dejan Sokolović*, Ph.D., Acting Director, Institute for Forage Crops, Kruševac - Serbia.
- *Milan Beslač*, Ph.D., Serbia, Faculty of Business Economics and Entrepreneurship, Belgrade - Serbia.
- Prof. *Jelena Damjanović*, Ph.D., Director, Novi Sad Business School, Novi Sad - Serbia.

- Prof. *Gojko Rikalović*, Ph.D., President, Association of the Economists of Belgrade, Belgrade - Serbia.
- Prof. *Mihailo Ostojić*, Ph.D., President, Council of Development Academy of Serbian Agriculture (RAPS), Belgrade - Serbia.
- Prof. *Radovan Pejanović*, Ph.D., Honorary President of Balkan Scientific Association of Agricultural Economist, Belgrade - Serbia.
- Prof. *Goran Maksimović*, Ph.D., President of Balkan Scientific Association of Agricultural Economist, Belgrade - Serbia.
- *Aleksandar Bogunović*, Secretary of the Association for Plant Production and Food Industry - Chamber of Commerce and Industry of Serbia, Belgrade - Serbia.
- *Miodrag Veseli*, Council for Smart Agriculture - Chamber of Commerce and Industry of Belgrade, Belgrade - Serbia.
- *Željko Ilić*, Director, Agricultural-Chemical High School in Obrenovac, Belgrade - Serbia.
- *Nikola Mihailović*, President, Cooperative Union of Serbia, Belgrade - Serbia.
- *Jelena Nestorov Bizonj*, President of the Cooperative Union of Vojvodina, Novi Sad - Serbia.
- *Mariana Golumbeanu*, Ph.D., Vice president of the Balkan Environmental Association (B.EN.A.), Thessaloniki - Greece.
- Prof. *Klaus Wagner*, Ph.D., Director of the Federal Institute of Agricultural Economics, Rural and Mountain Research, Vienna - Austria.
- Prof. *Luminita Chivu*, Ph.D., Director, National Institute for Economic Research “Costin C. Kiritescu”, Romanian Academy, Bucharest - Romania.
- Prof. *Gabriel Popescu*, Ph.D., Director of the Center for Study and Research for Agroforestry Biodiversity (CSCBAS), Bucharest - Romania.
- Prof. *Mirela Stoian*, Ph.D., Dean, Faculty of Agro-Food and Environmental Economics, Bucharest University of Economic Studies, Bucharest - Romania.
- Prof. *Ioan Brad*, PhD, Dean, Faculty of Management and Rural Tourism, University of Life Sciences “King Mihai I”, Timisoara - Romania.
- Prof. *Nicoleta Mateoc Sirb*, Ph.D., Director, Research Centre for Sustainable Rural Development of Romania, Romanian Academy, Timisoara - Romania.
- Prof. *Andrei Jean Vasile*, Ph.D., President of the Research Network on Resources Economics and Bioeconomy (RebResNet), Ploiesti - Romania.
- Prof. *Razvan Papuc*, Ph.D., Dean, Faculty of Administration and Business, University of Bucharest, Bucharest - Romania.
- Prof. *Sorin Mihai Cimpeanu*, Ph.D., Rector, University of Agronomic Sciences and Veterinary Medicine of Bucharest (USAMV), Bucharest - Romania.
- *Cecilia Alexandri*, Ph.D., Director, Institute of Agricultural Economics, Bucharest - Romania.
- Prof. *Božidar Ivanov*, Ph.D., Director, Institute of Agricultural Economics, Sofia - Bulgaria.
- *Vili Dragomir*, Ph.D., Director, Institute for Agriculture Economics and Rural Development (ICEADR), Bucharest - Romania.
- Prof. *Agatha Popescu*, Ph.D., University of Agricultural Sciences and Veterinary Medicine of Bucharest, Bucharest - Romania.
- Prof. *Ljiljana Tomić*, Ph.D., Founder of the University of Bijeljina, Bijeljina - Bosnia and Herzegovina.
- Prof. *Boro Krstić*, Ph.D., Dean, Faculty of Agriculture, University of Bijeljina, Bijeljina - Bosnia and Herzegovina.



## SCIENTIFIC BOARD

---

- Prof. *Jonel Subić*, Ph.D., Serbia - President
- Prof. *Wim Heijman*, Ph.D., the Netherlands
- Prof. *Adam Wasilewski*, Ph.D., Poland
- Prof. *Adrian Stancu*, Ph.D., Romania
- Prof. *Agnieszka Wrzochalska*, Ph.D., Poland
- Prof. *Albena Miteva*, Ph.D., Bulgaria
- Prof. *Aleksandar Ostojić*, Ph.D., Bosnia and Herzegovina
- Prof. *Aleksandra Despotović*, Ph.D., Montenegro
- Prof. *Alexandru Stratan*, Ph.D., Moldova
- Prof. *Andras Nabradi*, Ph.D., Hungary
- Prof. *Andreica Marin*, Ph.D., Romania
- Prof. *Anna Ivolga*, Ph.D., Russia
- Prof. *Blagica Sekovska*, Ph.D., Macedonia
- Prof. *Boro Krstić*, Ph.D., Bosnia and Herzegovina
- Prof. *Carmen Dobrota*, Ph.D., Romania
- Prof. *Catalin Dobrea*, Ph.D., Romania
- Prof. *Claudiu Cicea*, Ph.D., Romania
- Prof. *Cosmin Salasan*, Ph.D., Romania
- Prof. *Dan Boboc*, Ph.D., Romania
- Prof. *Donatella Privitera*, Ph.D., Italy
- Prof. *Dorel Dusmanescu*, Ph.D., Romania
- Prof. *Eirik Romstad*, Ph.D., Norway
- Prof. *Ferhat Čejvanović*, Ph.D., Bosnia and Herzegovina
- Prof. *Florentina Constantin*, Ph.D., Romania
- Prof. *Francisco J. Matus*, Ph.D., Chile
- Prof. *Gabriel Popescu*, Ph.D., Romania
- Prof. *Giuseppe Castaldelli*, Ph.D., Italy
- Prof. *Irina Gostin*, Ph.D., Romania
- Prof. *Irina Petrescu*, Ph.D., Romania
- Prof. *Ivo Grgić*, Ph.D., Croatia
- Prof. *Jean Vasile Andrei*, Ph.D., Romania
- Prof. *Jorde Jakimovski*, Ph.D., Macedonia
- Prof. *Julia Doitchinova*, Ph.D., Bulgaria
- Prof. *Karoly Bodnar*, Ph.D., Hungary
- Prof. *Maja Kožar*, Ph.D., Slovenia
- Prof. *Marco Platania*, Ph.D., Italy
- Prof. *Margaret Loseby*, Ph.D., Italy
- Prof. *Marian Podstawka*, Ph.D., Poland
- Prof. *Mariana Eftimie*, Ph.D., Romania
- Prof. *Marina Leshcheva*, Ph.D., Russia
- Prof. *Matteo Vittuari*, Ph.D., Italy
- Prof. *Micol Mastrocicco*, Ph.D., Italy
- Prof. *Mirela Matei*, Ph.D., Romania
- Prof. *Mirela Stoian*, Ph.D., Romania
- Prof. *Natalia Bannikova*, Ph.D., Russia
- Prof. *Novak Jauković*, Ph.D., Montenegro
- Prof. *Raluca Ignat*, Ph.D., Romania
- Prof. *Raluca Ion*, Ph.D., Romania
- Prof. *Raluca Ladaru*, Ph.D., Romania
- Prof. *Richard Simmons*, Ph.D., Scotland
- Prof. *Roxana Patarlageanu*, Ph.D. Romania
- Prof. *Vasilii Erokhin*, Ph.D., Russia
- Prof. *Vesna Gantner*, Ph.D., Croatia
- Prof. *Zvonimir Stienen*, Ph.D., Croatia
- Prof. *Željko Vaško*, Ph.D., Bosnia and Herzegovina
- Doc. *Adis Puška*, Ph.D., Bosnia and Herzegovina
- *Barbara Wieliczko*, Ph.D., Poland
- *Bogdan Bazga*, Ph.D., Romania
- *Dori Pavloska*, Ph.D., Macedonia
- *Ion Certan*, Ph.D., Moldova
- *Klaus Dieter Wagner*, Ph.D., Austria
- *Marek Wigier*, Ph.D., Poland
- *Marius Voicilas*, Ph.D., Romania
- *Monica Tudor*, Ph.D., Romania
- *Pawel Chmielinski*, Ph.D., Poland
- *Vaclav Vilhelm*, Ph.D., Czech Republic
- *Zbigniew Floriańczyk*, Ph.D., Poland
- Prof. *Aleksandra Vujko*, Ph.D., Serbia
- Prof. *Andreja Andrejević*, Ph.D., Serbia
- Prof. *Bojan Dimitrijević*, Ph.D., Serbia
- Prof. *Boris Kuzman*, Ph.D., Serbia
- Prof. *Branislav Vlahović*, Ph.D., Serbia
- Prof. *Danijela Despotović*, Ph.D., Serbia

- Prof. *Dejan Janković*, Ph.D., Serbia
- Prof. *Dejan Molnar*, Ph.D., Serbia
- Prof. *Dejan Sekulić*, Ph.D., Serbia
- Prof. *Dragan Milić*, Ph.D., Serbia
- Prof. *Dragan Nedeljković*, Ph.D., Serbia
- Prof. *Dragana Latković*, Ph.D., Serbia
- Prof. *Gordana Dozet*, Ph.D., Serbia
- Prof. *Gordana Mrdak*, Ph.D., Serbia
- Prof. *Igor Tomašević*, Ph.D., Serbia
- Prof. *Ilija Brčeski*, Ph.D., Serbia
- Prof. *Irena Janković*, Ph.D., Serbia
- Prof. *Ivan Bošnjak*, Ph.D., Serbia
- Prof. *Ivana Domazet*, Ph.D., Serbia
- Prof. *Jasmina Mijajlović*, Ph.D., Serbia
- Prof. *Jugoslav Aničić*, Ph.D. Serbia
- Prof. *Lela Ristić*, Ph.D., Serbia
- Prof. *Leposava Zečević*, Ph.D., Serbia
- Prof. *Ljubinko Jovanović*, Ph.D., Serbia
- Prof. *Marija Kostić*, Ph.D., Serbia
- Prof. *Marija Lakićević*, Ph.D., Serbia
- Prof. *Marija Mandarić*, Ph.D., Serbia
- Prof. *Marija Nikolić*, Ph.D., Serbia
- Prof. *Marija Lazarević*, Ph.D., Serbia
- Prof. *Mića Mladenović*, Ph.D., Serbia
- Prof. *Mihailo Manić*, Ph.D., Serbia
- Prof. *Mihajlo Ratknić*, Ph.D., Serbia
- Prof. *Milena Rikalović*, Ph.D., Serbia
- Prof. *Milica Bošković*, Ph.D., Serbia
- Prof. *Milivoj Ćosić*, Ph.D., Serbia
- Prof. *Miljan Leković*, Ph.D., Serbia
- Prof. *Miljana Barjaktarović*, Ph.D., Serbia
- Prof. *Miodrag Brzaković*, Ph.D., Serbia
- Prof. *Natalija Bogdanov*, Ph.D., Serbia
- Prof. *Nemanja Berber*, Ph.D., Serbia
- Prof. *Nenad Stanišić*, Ph.D., Serbia
- Prof. *Nikola Milićević*, Ph.D., Serbia
- Prof. *Olgica Zečević Stanojević*, Ph.D., Serbia
- Prof. *Rade Popović*, Ph.D., Serbia
- Prof. *Radivoj Prodanović* Ph.D. Serbia
- Prof. *Sanja Mrazovac Kurilić*, Serbia
- Prof. *Sanjin Ivanović*, Ph.D., Serbia
- Prof. *Sladjan Rašić*, Ph.D., Serbia
- Prof. *Sladana Vujčić*, Ph.D., Serbia
- Prof. *Sonja Josipović*, Ph.D., Serbia
- Prof. *Sreten Jelić*, Ph.D., Serbia
- Prof. *Stanislav Zekić*, Ph.D., Serbia
- Prof. *Tamara Paunović*, Ph.D., Serbia
- Prof. *Tanja Stanišić*, Ph.D., Serbia
- Prof. *Tatjana Dimitrijević*, Ph.D., Serbia
- Prof. *Tatjana Jovanić*, Ph.D., Serbia
- Prof. *Todor Marković*, Ph.D., Serbia
- Prof. *Veljko Vukoje*, Ph.D., Serbia
- Prof. *Vera Mirović*, Ph.D., Serbia.
- Prof. *Vesna Rodić*, Ph.D., Serbia
- Prof. *Vladan Pavlović*, Ph.D., Serbia
- Prof. *Vlade Zarić*, Ph.D., Serbia
- Prof. *Vladimir Zakić*, Ph.D., Serbia
- Prof. *Vladislav Zekić*, Ph.D., Serbia
- Prof. *Zoran Njegovan*, Ph.D., Serbia
- Prof. *Zoran Rajić*, Ph.D., Serbia
- Prof. *Zorica Sredojević*, Ph.D., Serbia
- Prof. *Željko Dolijanović*, Ph.D., Serbia
- Prof. *Vera Rajičić*, Ph.D., Serbia.
- Doc. *Dragan Terzić*, Ph.D., Serbia
- Doc. *Gordana Radović*, Ph.D., Serbia
- Doc. *Marija Lukić*, Ph.D., Serbia
- Doc. *Maja Grgić*, Ph.D., Croatia
- Doc. *Mirela Tomaš*, Ph.D., Serbia
- Doc. *Miroslav Nedeljković*, Ph.D., Serbia
- Doc. *Violeta Babić*, Ph.D., Serbia
- Doc. *Vladan Cogoljević*, Ph.D., Serbia
- *Aleksandar Lepasavić*, Ph.D., Serbia
- *Aleksandar Lučić*, Ph.D., Serbia
- *Aleksandra Ivetić*, Ph.D., Serbia
- *Ana Marjanović Jeromela*, Ph.D., Serbia
- *Aneta Buntić*, Ph.D., Serbia
- *Anton Puškarić*, Ph.D., Serbia
- *Biljana Grujić Vučkovski*, Ph.D., Serbia
- *Branko Mihailović*, Ph.D., Serbia
- *Danica Mićanović*, Ph.D., Serbia
- *Dejan Živkov*, Ph.D., Serbia
- *Divna Simić*, Ph.D., Serbia

- *Gordana Radović*, Ph.D., Serbia
- *Isidora Beraha*, Ph.D., Serbia
- *Isidora Ljumović*, Ph.D., Serbia
- *Jelena Maksimović*, Ph. D., Serbia
- *Katica Radosavljević*, Ph.D., Serbia
- *Lana Nastić*, Ph.D., Serbia
- *Ljiljana Rajnović*, Ph.D., Serbia
- *Marijana Jovanović Todorović*, Ph.D., Serbia
- *Marko Jeločnik*, Ph.D., Serbia
- *Mihajlo Ratknić*, Ph.D., Serbia
- *Milena Simić*, Ph.D., Serbia
- *Mirjana Despotović*, Ph.D., Serbia
- *Nataša Kljajić*, Ph.D., Serbia
- *Nataša Papić Blagojević*, Ph.D., Serbia
- *Olivera Jovanović*, Ph.D., Serbia
- *Predrag Vuković*, Ph.D., Serbia
- *Radmila Jovanović*, Ph.D., Serbia
- *Ratibor Štrbanović*, Ph.D., Serbia
- *Robert Radišić*, Ph.D., Serbia
- *Sanja Đurović*, Ph.D., Serbia
- *Sanja Popović Pantić*, Ph.D, Serbia
- *Sladčan Stanković*, Ph.D., Serbia
- *Slavica Arsić*, Ph.D., Serbia
- *Slavica Čolić*, Ph.D., Serbia
- *Slavica Stevanović*, Ph.D., Serbia
- *Slobodan Cvetković*, Ph.D., Serbia
- *Sonja Đuričin*, PhD., Serbia
- *Vedran Tomić*, Ph.D., Serbia
- *Vera Popović*, Ph.D., Serbia
- *Vesna Paraušić*, Ph.D., Serbia
- *Vesna Popović*, Ph.D., Serbia
- *Violeta Anđelković*, Ph.D., Serbia
- *Vladan Ugrenović*, Ph.D., Serbia
- *Vladeta Stevović*, Ph.D., Serbia
- *Vladimir Filipović*, Ph.D., Serbia
- *Vladimir Miladinović*, Ph.D., Serbia
- *Vlado Kovačević*, Ph.D., Serbia
- *Zoran Simonović*, Ph.D., Serbia
- *Željko Despotović*, Ph.D., Serbia

## **ORGANIZATIONAL BOARD**

---

- *Marijana Jovanović Todorović*, Ph.D. - President
- *Doc. Miroslav Nedeljković*, Ph.D. - Vice President
- *Prof. Jonel Subić*, Ph.D.
- *Anton Puškarić*, Ph.D.
- *Biljana Grujić Vučkovski*, Ph.D.
- *Boban Zarić*
- *Bojana Bekić Šarić*, Ph.Ds.
- *Gordana Radović*, Ph.D.
- *Irina Marina*, PhDs.
- *Ivana Vučetić*
- *Lana Nastić*, Ph.D.
- *Ljiljana Rajnović*, Ph.D.
- *Marko Jeločnik*, Ph.D.
- *Milena Marinković*
- *Nada Mijajlović*, M.A.
- *Nataša Kljajić*, Ph.D.
- *Predrag Vuković*, Ph.D.
- *Prof. Boris Kuzman*, Ph.D.
- *Prof. Branko Mihailović*, Ph.D.
- *Prof. Dragan Nedeljković*, Ph.D.
- *Prof. Leposava Zečević*, Ph.D.,
- *Prof. Olgica Zečević Stanojević*, Ph.D.
- *Prof. Zoran Simonović*, Ph.D.
- *Slavica Arsić*, Ph.D.
- *Velibor Potrebić*, Ph.Ds.
- *Vesna Paraušić*, Ph.D.
- *Vesna Popović*, Ph.D.
- *Vesna Stajčić*

## 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, Ralitz 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

# FOLIAR APPLICATION OF NANOFERTILIZER IMPROVES SEED QUALITY PERFORMANCE OF TOMATO (*SOLANUM LYCOPERSICUM* L.)<sup>1</sup>

Gordana Tamindžić<sup>1</sup>, Sergei Azizbekian<sup>2</sup>, Srđan Zec<sup>1</sup>, Slobodan Vlajić<sup>1</sup>,  
Dragana Milošević<sup>1</sup>, Dragana Miljaković<sup>1</sup>, Maja Ignjatov<sup>1</sup>

## Abstract

*Many reports emphasized the role of calcium fertilizers in tomato production as a key nutrient for enhancing productivity and its positive relationship with quality attributes. The application of nanotechnology in modern agriculture has gained significant attention recently due to the recent discovery of nanochemicals as potentially effective pesticides, fertilizers, and promising agents for plant growth. Recent scientific data indicated the positive effects of calcium nanoparticles (NPs) on plant growth and development, and subsequent yield and yield quality of many crops. However, there is a lack of information on their effect on tomato seed quality and initial plant growth.*

*The purpose of this study was to assess how tomato seed quality and initial plant growth were affected by the foliar application with two fertilizers containing different forms of calcium, i.e. the conventional fertilizer YaraLiva – Calcinit (Yara Suomi OI, Finland) containing 15,5 % of the total N and 26,3 % calcium (CaO) and nanofertilizer Nanoplant Ca-Si (JSC “ECO – Vlit“, Lithuania), which contains nanoparticles of calcium and silicium. The experimental materials included seeds of seven tomato lines which differed genetically (S49, S50, N4, N7, N9, N14, N16). Tomato plants were treated during the growing season with the aforementioned products in the manufacturer’s recommended doses. Following harvest, tomato seeds were collected for analysis. Untreated tomato seeds were used as control. The evaluation of the seed quality and initial plant growth was done using the germination test.*

---

1 This study was supported by the Ministry of Science, Technological Development and Innovation of the Republic of Serbia, grant number: 451-03-47/2023-01/200032. Institute of Field and vegetable Crops, National institute of the republic of Serbia, Novi Sad, Serbia

2 Institute of Physical Organic Chemistry, National Academy of Sciences of Belarus, Minsk, Belarus

\* Corresponding author: [gordana.tamindzic@ifvcns.ns.ac.rs](mailto:gordana.tamindzic@ifvcns.ns.ac.rs)

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

