



Faculty of Agriculture
University of Banja Luka



XIII INTERNATIONAL SYMPOSIUM ON AGRICULTURAL SCIENCES



BOOK OF ABSTRACTS

27-30 May 2024, Trebinje, Bosnia and Herzegovina

XIII International Symposium on Agricultural Sciences "AgroReS 2024"

27-30 May 2024, Trebinje, Bosnia and Herzegovina

BOOK OF ABSTRACTS

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XXIII INTERNATIONAL SYMPOSIUM ON AGRICULTURAL SCIENCES

AgroReS 2024



and

XXIX CONFERENCE OF AGRICULTURAL ENGINEERS OF THE REPUBLIC OF SRPSKA

27-30 May 2024

Trebinje, Bosnia and Herzegovina

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Symposium Program



SYMPOSIUM PROGRAM OVERVIEW

Monday, 27 May 2024		
12:00 – 19:00	Participant registration	Hotel <i>Leotar</i> , Lobby
16:00 – 17:00	Opening ceremony	HET Hall
17:00 – 18:30	Plenary lectures	HET Hall
19:30	Sports event	Sport Hall <i>Miloš Mrdić</i>
Tuesday, 28 May 2024		
08:30 – 17:00	Participant registration	Hotel <i>Leotar</i> , Lobby
09:00 – 13:30	Session 1: Horticulture	Hotel <i>Leotar</i> , Large Salon
09:00 – 13:00	Session 2: Agricultural economics and rural development	Hotel <i>Leotar</i> , Red Salon
14:00 – 16:00	Lunch break	
16:00 – 18:00	Homage: Agro-knowledge Journal - our 25 years Round table: Transfer of knowledge and innovations in agriculture – from individual cases to functional AKIS	Hotel <i>Leotar</i> , Large Salon
20:00 – 21:00	Cultural event: Concert of the City Choir <i>Tribunia</i>	Cultural centre Trebinje
Wednesday, 29 May 2024		
08:30 – 17:00	Participant registration	Hotel <i>Leotar</i> , Lobby
09:00 – 13:30	Session 3: Crop Science	Hotel <i>Leotar</i> , Large Salon
09:00 – 12:00	Session 4: Animal Science	Hotel <i>Leotar</i> , Red Salon
13:30 – 14:00	Promotion of the book: Memorial to Academician Vaskrsija Janjić	Hotel <i>Leotar</i> , Large Salon
14:00 – 16:00	Lunch break	
14:30 – 17:30	XXIX Conference of Agricultural Engineers of the Republic of Srpska: Youth in Agriculture	Hotel <i>Leotar</i> , Large Salon
20:00	Gala evening	Hotel <i>Leotar</i> , Restaurant
Thursday, 30 May 2024		
09:00 – 13:00	Excursion: Visit to Vjetrenica Cave and Tvrdoš Monastery	

Monday, 27 May 2024

16:00 - 17:00	OPENING CEREMONY	HET Hall
	<ul style="list-style-type: none"> – Zlatan Kovačević, Dean of the Faculty of Agriculture, University of Banja Luka – Radoslav Gajanin, Rector of the University of Banja Luka – Savo Minić, Minister of Agriculture, Forestry and Water Management of the Republic of Srpska – Željko Budimir, Minister of Scientific and Technological Development and Higher Education of the Republic of Srpska – Mirko Ćurić, Mayor of the Trebinje City – Boris Pašalić, President of the Organizing Committee 	
	PLENARY LECTURES	HET Hall
17:00 - 17:30	<i>Patrizia Pugliese</i>	ORGANIC AGRICULTURE FOR TERRITORIAL DEVELOPMENT: THE EXPERIENCE OF ORGANIC DISTRICTS
17:30 - 18:00	<i>Daniel Falta</i>	AGRICULTURE 4.0 IN LIVESTOCK PRODUCTION SYSTEMS
18:00 - 18:30	<i>Adrian Asānica</i>	CHALLENGES AND OPPORTUNITIES FOR PRODUCTION SYSTEM IN BERRY CROPS

Tuesday, 28 May 2024

Session 1	HORTICULTURE	Large Salon
	Chair: <i>Dragana Šunjka, Miljan Cvetković, Dejan Bošnjak</i>	
09:00 - 9:10 O1_01	<i>Gordana Đurić, Boris Pašalić, Saša Lalić, Nikola Mićić</i>	REGIONIZATION – AN OPEN ISSUE OF DEVELOPMENT AND SUSTAINABLE INTENSIFICATION OF FRUIT PRODUCTION
09:10 - 09:20 O1_02	<i>Dejan Bošnjak, Aleksandar Stanisavljević, Ivna Štolfa Čamagajevac, Dejan Agić, Marija Špoljarević, Antonija Strilić, Matej Horvat</i>	EVALUATION OF THE INTERNAL QUALITY OF CONTEMPORARY APPLE VARIETIES SUITABLE FOR ORGANIC PRODUCTION
09:20 - 09:30 O1_03	<i>Miljan Cvetković, Jelisaveta Seka Cvijanović, Jelena Topić</i>	VARIETAL SPECIFICITIES OF DORMANT PRUNING OF TWO-DIMENSIONAL TRAINING SYSTEMS OF EUROPEAN PLUM (<i>Prunus domestica</i> L.)
09:30 - 09:40 O1_04	<i>Mira Milinković, Svetlana M. Paunović, Aneta Buntić, Magdalena Knežević, Jelena Pavlović, Dragana Vidojević</i>	THE USE OF 1-METHYLCYCLOPROPENE (1-MCP) IN NECTARINE STORAGE

09:40 - 09:50 O1_05	<i>Juan Luis Fernández Lorenzo, Ana Couso Viana, Rosa Mosquera Losada, Antonio Rigueiro Rodríguez, Svjetlana Zeljković</i> ESTABLISHMENT OF IN VITRO ACCESSIONS OF TWO GALICIAN MONUMENTAL CHESTNUT TREES
09:50 - 10:00 O1_06	<i>Dragana Bošković, Nuray Baser, Slavica Vuković, Sanja Lazić, Aleksandra Šušnjar, Dušan Čulum, Antonije Žunić, Jelena Ećimović, Dragana Šunjka</i> EVALUATION OF <i>Pimpinella anisum</i> ESSENTIAL OILS ON EGG-LAYING BEHAVIOR OF <i>Drosophila suzukii</i> : A MULTIPLE-CHOICE TEST APPROACH
10:00 - 10:40	POSTER PRESENTATIONS: P1_01 – P1_25
10:40 - 11:00	Discussion
11:00 - 11:20	Coffee break
	Chair: <i>Darko Jakšić, Miljan Cvetković, Juan Luis Fernández Lorenzo</i>
11:20 - 11:30 O1_07	<i>Bogoljub Kandić, Jelena Latinović, Nedeljko Latinović</i> INTENSITY OF SPREAD AND ECONOMIC IMPORTANCE OF ESCA DISEASE IN MONTENEGRO
11:30 - 11:40 O1_08	<i>Aleksandar Piperevski, Violeta Dimovska, Atanas Runchev, Dejan Milanov, Aleksandar Runchev</i> DETERMINATION OF FREE HYDROCYANIC ACID IN HOMEMADE PRODUCED FRUIT BRANDIES
11:40 - 11:50 O1_09	<i>Numan Ali, Amna Shoaib</i> VANILLIC ACID MEDIATED DISEASE TOLERANCE IN MUNGBEAN AGAINST <i>Macrophomina phaseolina</i> THROUGH THE ENHANCEMENT OF PLANT ANTIOXIDANT DEFENSE GENE
11:50 - 12:00 O1_10	<i>Hajar Bencheikh, Mohamed El-Aalaoui, Mohamed Sbaghi, Abdelaziz Yasri, Mohamed Dakir, Aziz Aboulmouhajir</i> BOTANICAL DESCRIPTION AND CHEMICAL PROFILE OF <i>Opuntia</i> spp. (Cactaceae)
12:10 - 12:50	POSTER PRESENTATIONS: P1_26 – P1_61
12:50 - 13:30	Discussion
14:00 - 16:00	Lunch break
Session 2	AGRICULTURAL ECONOMICS AND RURAL DEVELOPMENT
	Red Salon
	Chair: <i>Gordana Rokvić Knežić, Ivo Zdráhal, Anna Hajdu</i>
09:00 - 09:10 O2_01	<i>William H. Meyers</i> GLOBAL FOOD SECURITY CHALLENGES: OPPORTUNITIES AND THREATS
09:10 - 09:20 O2_02	<i>Ivo Zdráhal, Sebastian Stępień, Francois S. Lategan, Eliška Svobodová, Michal Borychowski, Agnieszka Sapa, Katarzyna Smędzik-Ambroży, Libor Grega</i> BARRIERS TO PARTICIPATE IN SHORT FOOD SUPPLY CHAINS: PRELIMINARY RESULTS FROM THE SURVEY AMONG FARMERS IN POLAND AND THE CZECH REPUBLIC

09:20 - 09:30 O2_03	<i>Anna Hajdu</i> NAVIGATING PRESSURE: CORPORATE SOCIAL RESPONSIBILITY IN EASTERN EUROPEAN AGRICULTURE AMID GROWING CRITICISM AND PROTESTS
09:30 - 09:40 O2_04	<i>Željko Vaško</i> GREENING AGRICULTURE FROM THE PERSPECTIVE OF BOSNIA AND HERZEGOVINA
09:40 - 09:50 O2_05	<i>Hamidreza Solaymani Osbooei, Vesna Mrdalj, Milan Šipka</i> UNDENIABLE NECESSITY OF INNOVATIVE SYSTEMS AND NATURE BASED SOLUTION IN ADAPTATION TO CLIMATE CHANGE IN AGRICULTURAL SECTOR
09:50 - 10:00 O2_06	<i>Ranko Gantner, Zvonimir Steiner, Vesna Gantner</i> POTENTIAL ROLE OF LOW-INPUT FARMING IN SUSTAINABLE DEVELOPMENT OF AGRICULTURE AND MODERN SOCIETIES
10:00 - 10:10 O2_07	<i>Dragan Dokić, Vesna Gantner</i> THE IMPORTANCE OF ENSURING AGRICULTURAL PRODUCTION ON THE EXAMPLE OF THE REPUBLIC OF CROATIA
10:10 - 10:20 O2_08	<i>Marija Gjosheva Kovachevikj, Lazo Dimitrov, Despina Popovska Stojanov, Aleksandra Martinovska Stojcheska</i> FACTORS INFLUENCING RURAL YOUTH MIGRATION IN NORTH MACEDONIA
10:20 - 10:30 O2_09	<i>Milica Ilić, Zorica Srđević, Bojan Srđević, Jasna Grabić, Laslo Galamboš, Dušanka Cvijanović, Pavel Benka</i> ENHANCING ECOSYSTEMS' AND SOCIAL RESILIENCE: RESTORE4LIFE WETLAND RESTORATION INITIATIVE
10:30 - 10:40 O2_10	<i>Gordana Rokvić Knežić, Ljiljana Drinić, Jovana Lazendić</i> AGRICULTURE KNOWLEDGE AND INFORMATION SYSTEM IN REPUBLIKA SRPSKA
10:40 - 10:50 O2_11	<i>Nebojša Novković, Dragana Novaković, Blagoje Paunović</i> THE INFLUENCE OF YIELD AND PRICE OF SUGAR BEET FROM CURRENT YEAR ON SOWING AREA OF SUGAR BEET IN FOLLOWING YEAR
10:50 - 11:00 O2_12	<i>Nemanja Jalić, Jovana Antelj, Aleksandar Bačević, Milan Ivković, Nikolina Čerketa, Željko Vaško, Aleksandar Ostojić, Branko Drljača, Petar Nikolić</i> CONSUMER PREFERENCES ABOUT FRUIT BRANDIES
11:00 - 11:10 O2_13	<i>Ranko Sarić, Snežana Branković, Adiba Džudović</i> PRODUCTION OF WOOD ASSORTMENTS OF POPLAR CLONE POPULUS DELTOIDES AND CORN YIELD ON FLUVISOL
11:10 - 11:40	Discussion
11:40 - 12:00	Coffee break
12:00 - 12:20	POSTER PRESENTATIONS: P2_01 – P2_13
	Chair: <i>Željko Vaško, Marija Gjosheva Kovachevikj, Tamara Stojanović</i>
12:20 - 13:00	Discussion
14:00 - 16:00	Lunch break

16:00 - 18:00	HOMAGE: Agro-knowledge Journal - our 25 years * OMAŽ: Agroznanje – naših 25 godina ROUND TABLE: Transfer of knowledge and innovations in agriculture – from individual cases to functional AKIS * OKRUGLI STO: Transfer znanja i inovacija u poljoprivredi - od pojedinačnih slučajeva do funkcionalnog AKIS-a	Large Salon
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* *This part of the Symposium program is in Serbian.*

Moderator: *Željko Vaško*, Faculty of Agriculture, University of Banja Luka

Panelists: *Aleksandar Ostojić*, vice-rector for scientific research and development, University of Banja Luka;
Goran Bursać, Assistant Minister, Department for providing professional services in agriculture, Ministry of Agriculture, Forestry and Water Management of the Republic of Srpska;
Veselin Dutina, director, Agrarian Fund of the City of Trebinje;
Dušan Andrijašević, president, Association of breeders of Gatačko cattle

20:00 - 21:00 **CULTURAL EVENT: Concert of the City Choir *Tribunia***

Cultural centre Trebinje (venue in the center of the city)

Aleksandra Rajković, prof., conductor
Anja Đurić, performer of traditional music
Ratomir Mijanović, artistic director of the program

Wednesday, 29 May 2024

Session 3	CROP SCIENCE	Large Salon
	<i>Chair: Jan Turan, Ranko Gantner, Branimir Nježić</i>	
09:00-09:10 O3_01	<i>Giulio D'Amato, Luigi Capodieci, Luigi Chiappinelli</i> BLULEAF®: A DECISION SUPPORT SYSTEM (DSS) FOR AGRICULTURAL WATER MANAGEMENT	
09:10-09:20 O3_02	<i>Mihajlo Marković, Đurađ Hajder, Milan Šipka, Mladen Todorović, Nery Zapata, Teresa A. Paço, Erminio E. Riezzo, Sabrija Čadro</i> SMARTWATER PROJECT IMPLEMENTATION IN THE PERIOD 2021-2024 AND SMART MANAGEMENT OF LAND AND WATER RESOURCES IN BIH AGRICULTURE	
09:20-09:30 O3_03	<i>Lazar Turšijan, Jan Turan, Aleksandar Sedlar, Filip Vasić</i> ENHANCING CORN YIELD THROUGH VARIABLE SOWING: INTEGRATING SATELLITE AND DRONE TECHNOLOGIES FOR PRECISION AGRICULTURE	

09:30-09:40 O3_04	<i>Daniel Kalnin</i> SOIL NUTRIENT QUALITY IN ORGANIC SOY PRODUCTION IN TOGO - A SURVEY
09:40-09:50 O3_05	<i>Michał Pol, Florian Tröber, Knut Schmidtke</i> THE UNDERGROUND PROPERTIES OF RIBWORT PLANTAIN
09:50-10:00 O3_06	<i>Filip Vasić, Aleksandar Sedlar, Jan Turan, Lazar Turšijan</i> OPTIMIZATION OF PESTICIDE APPLICATION USING PRECISION AGRICULTURE TECHNOLOGIES AND MODERN NOZZLES
10:00-10:10 O3_07	<i>Darko Jovanović, Vera Rajčić, Bojana Gavrilović, Ivana Živković, Biljana Šević, Viliana Vasilieva, Jelena Stojiljković</i> GROWING SEASON CONDITIONS AND PLANTING DENSITY IMPACT ON SOME MORPHOLOGICAL CHARACTERISTICS ON DIFFERENT MAIZE (<i>Zea mays</i> L.) HYBRIDS
10:10-10:50	POSTER PRESENTATIONS: P3_01 – P3_20
10:50-11:10	Discussion
11:10-11:30	Coffee break
	Chair: <i>Željko Dolijanović, Vojka Babić, Biljana Kelečević</i>
11:30-11:40 O3_08	<i>Vojka Babić, Natalija Kravić, Zoran Jovović, Milosav Babić, Zlata Luthar, Violeta Anđelković</i> DIVERSITY AND REDUNDANCY ASSESSMENT OF MONTENEGRIN AND SLOVENIAN MAIZE LANDRACES CONSERVED IN MRIZP GENE BANK
11:40-11:50 O3_09	<i>Desimir Knežević, Danijela Kondić, Dragan Grčak, Milosav Grčak, Mirela Matković Stojšin, Dušan Urošević, Danica Mićanović, Aleksandar Paunović, Veselinka Zečević</i> VARIABILITY OF SPIKE SPIKELETS NUMBER IN BREAD WHEAT
11:50-12:00 O3_10	<i>Biljana Ristakjovska Shirgovska, Tatjana Prentovikj, Zoran Dimov, Snežana Katanski, Svetlana Vujić</i> INFLUENCE OF THE SEEDING RATE, ROW SPACING, AND CULTIVAR ON ALFALFA FORAGE YIELD IN THE FIRST PRODUCTION YEAR
12:00-12:10 O3_11	<i>Stevan Trivković, Danijela Kondić, Desimir Knežević</i> PROTEIN CONTENT IN WHEAT GRAINS AS A RESULT OF INTERACTION OF AGROECOLOGICAL CONDITIONS AND AGROTECHNICAL TREATMENTS
12:10-12:20 O3_12	<i>Dragan Grčak, Desimir Knežević, Milosav Grčak, Snežana Gošić Dondo, Dejan Dodig, Vesna Kandić, Miroljub Aksić, Slaviša Gudžić, Katerina Nikolić</i> DAMAGES IN WHEAT VARIETIES CAUSED BY CEREAL LEAF BEETLE (<i>Oulema melanopus</i> L.) UNDER TREATMENT BY INSECTICID
12:20-12:30 O3_13	<i>Mihajlo Voruna, Zorana Đekanović, Relja Suručić, Duška Delić</i> MYCOTOXIN DETECTION IN FUSARIUM SPECIES COMPLEX ISOLATES: TOWARDS UNDERSTANDING TOXIN PRODUCTION AND MANAGEMENT STRATEGIES
12:30-13:10	POSTER PRESENTATIONS: P3_21 –P3_42
13:10-13:30	Discussion

13:30-14:00	PROMOTION OF THE BOOK: Memorial to Academician Vaskrsija Janjić * PROMOCIJA KNJIGE: Spomenica akademiku Vaskrsiji Janjiću	Large Salon
<i>Novo Pržulj, Sava Vrbničanin, Biljana Kelečević, Siniša Mitrić</i>		
* This part of the Symposium program is in Serbian.		
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Section 4	ANIMAL SCIENCES	Red Salon
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09:00 - 09:10 O4_01	<i>Mária Kapusniaková, Milan Šimko, Miroslav Juráček, Ondrej Hanušovský, Michal Rolínek, Branislav Gálik, Matúš Džima</i> NUTRITIONAL ASPECTS OF TOTAL MIX RATION AND THEIR IMPACT ON THE ACTIVITY OF DAIRY COWS	
09:10 - 09:20 O4_02	<i>Dimitar Nakov, Aco Kuzelov, Slavča Hristov, Branislav Stanković, Jelena Miočinović, Marko Cincović</i> MASTITIS MAKES CHANGES IN THE BLOOD ANTIOXIDANT ENZYME ACTIVITY DURING THE TRANSITION PERIOD OF DAIRY COWS: PART II	
09:20 - 09:30 O4_03	<i>Branimir Vidović, Momčilo Šaran, Ljuba Štrbac, Dobrila Janković, Snežana Trivunović</i> POLYMORPHISM OF B-CASEIN IN HOLSTEIN COWS IN VOJVODINA	
09:30 - 09:40 O4_04	<i>Vesna Gantner, Zvonimir Steiner, Biljana Rogić, Ranko Gantner, Krešimir Kuterovac</i> THE POTENTIAL OF VARIOUS FATTY ACIDS FOUND IN MILK AND DAIRY PRODUCTS TO PREVENT CANCER	
09:40 - 09:50 O4_05	<i>Aleksandar Ignjatović, Blagoje Stojković, Stefan Stepić, Nikola Mihajlović, Predrag Perišić</i> IMPACT OF NON-GENETIC FACTORS ON REPRODUCTIVE TRAITS OF EWES AND LAMB WEIGHT UNTIL WEANING IN THE SJENICA PRAMENKA SHEEP	
09:50 - 10:00 O4_06	<i>Dušica Radonjić, Milan Marković, Božidarka Marković, Olga Jokanović, Milena Đokić</i> PLANT SPECIES RICHNESS AND BIOMASS CHEMICAL COMPOSITION OF THE PASTURES IN DIFFERENT AREAS OF MONTENEGRO	
10:00 - 10:10 O4_07	<i>Damir Rimac, Petar Marković, Dušan Gajić, Emir Mešanović</i> PRECISE FEEDING OF FATTENING PIGS AND ITS EFFECT ON BUSINESS ECONOMICS FOR THE EXAMPLE OF BOSNIA AND HERZEGOVINA	
10:10 - 10:20 O4_08	<i>Simeon Rakonjac, Snežana Bogosavljević-Bošković, Vladimir Dosković, Miloš Lukić, Zdenka Škrbić, Veselin Petričević, Milun D. Petrović</i> EFFECT OF REARING SYSTEM AND GENOTYPE OF LAYING HENS ON THE BREAKING STRENGTH OF TIBIA AND FEMUR	
10:20 - 10:40	Coffee break	

10:40 - 10:50 O4_09	<i>Neđo Stokanović, Sava Spiridonović, Lidija Perić, Mirjana Đukić Stojić</i> EFFECT OF DIFFERENT PRODUCTION SYSTEMS ON QUALITY OF TABLE EGGS
10:50 - 11:00 O4_10	<i>Michael Oke</i> AN OVERVIEW OF THE FISH ISSUES FACING GWAGWALADA'S FISH FARMERS AND TRADERS NIGERIA'S ABUJA
11:00 - 11:10 O4_11	<i>Sladana Preradović, Biljana Rogić, Božo Važić, Milica Čutković</i> INFLUENCE OF LIPIZZAN STALLIONS ON BODY MEASUREMENTS OF FOALS
11:10 - 11:20 O4_12	<i>Matuš Džima, Miroslav Juráček, Branislav Gálik, Milan Šimko, Michal Rolinec, Ondrej Hanušovský, Mária Kapusniaková</i> FATTY ACID PROFILE OF COMMERCIAL DRY DOG FOODS WITH AND WITHOUT INSECT
11:20 - 11:40	POSTER PRESENTATIONS: P4_01 – P4_16
11:40 - 12:00	Discussion
14:00 - 16:00	Lunch break

XXIX CONFERENCE OF AGRICULTURAL ENGINEERS OF THE REPUBLIC OF SRPSKA: Youth in Agriculture *

Large Salon

XXIX SAVJETOVAŃE INJEŃERA POĽOPRIVREDE REPUBLIKE SRPSKE: Млади у пољопривреди

** This part of the Symposium program is in Serbian.*

14:30 - 14:45	Уводно обраћање	<i>Opening address</i>
14:45 - 15:00	<i>Бојан Ћикић</i> Пројектно позиционирање младих у пољопривреди	<i>Bojan Ćikić</i> Project Positioning of Young People in Agriculture
15:00 - 15:15	<i>Ђорђе Грујић</i> Активизам младих у служби руралног развоја	<i>Dorđe Grujić</i> Youth Activism in the Service of Rural Development
15:15 - 15:55	Панел 1: Изазови и прилике за младе у агробизнису Модератор: <i>Маринко Векић</i> , Учесници: <i>Мара Пупчевић, Лука Врачар, Игор Дабих, Немања Јалић, Бојана Петровић, Драгана Дувњак Крндија, Милош Галић</i>	Panel 1: Challenges and Opportunities for Youth in Agribusiness Moderator: <i>Marinko Vekić</i> , Participants: <i>Mara Pupčević, Luka Vračar, Igor Dabić, Nemanja Jalić, Bojana Petrović, Dragana Duvnjak Krndija, Miloš Galić</i>
15:55 - 16:15	Пауза за кафу	Coffee break
16:15 - 16:30	<i>Виолета Лемих</i> Исходи I фазе кампање Млади у пољопривреди	<i>Violeta Lemić</i> Outcomes of Phase I of the Youth in Agriculture Campaign

16:30 - 17:15	Панел 2: Институционална подршка младима у пољопривреди Модератор: <i>Петар Николић</i> , Учесници: <i>Саша Лалић, Драган Вучковић, Гордана Роквић Кнежић, Драган Шена, Радомир Вукелић, Кристина Дутина, Живан Митровић</i>	Panel 2: Institutional Support for Young People in Agriculture Moderator: <i>Petar Nikolić</i> , Participants: <i>Saša Lalić, Dragan Vučković, Gordana Rokvić Knežić, Dragan Šepa, Radomir Vukelić, Kritina Dutina, Živan Mitrović</i>
17:15 - 17:30	<i>Петар Николић</i> Млади и пољоприведа – поглед у будућност	<i>Petar Nikolić</i> Youth and agriculture - a look into the future
20:00	Gala evening	Hotel <i>Leotar</i> , Restaurant

Thursday, 30 May 2024

09:00 – 13:00 EXCURSION: Visit to Vjetrenica Cave and Monastery Tvrdoš

LIST OF THE POSTER PRESENTATIONS

SESSION 1: HORTICULTURE

LARGE HALL

- P1_01 *Ivana Radović, Aleksandar Radović, Slađana Savić, Milena Marjanović, Milica Miletić, Jelica Novaković, Zorica Jovanović*
BIOCHEMICAL AND MORPHOLOGICAL ANALYSIS OF FRUIT QUALITY TRAITS OF DIFFERENT TRADITIONAL APPLE GENOTYPES FROM WESTERN SERBIA
- P1_02 *Miroslav Lisjak, Jelena Ravlić, Tomislav Vinković, Andrijana Rebekić, Tihana Teklić*
EFFECT OF HEAT STRESS ON ANTIOXIDANT STATUS IN APPLE LEAVES GROWN IN TWO DIFFERENT MICROCLIMATES
- P1_03 *Nada Zavišić, Jelena Davidović Gidas, Gordana Đurić*
PRELIMINARY EVALUATION OF THE FRUIT VALUE OF SELECTED WILD PEAR (*Pyrus communis* L.) SEEDLINGS IN THE *EX SITU* COLLECTION OF THE AGRICULTURAL INSTITUTE
- P1_04 *Sandra Bijelić, Borivoje Bogdanović, Draža Janković, Goran Jaćimović*
PLANT PRODUCTION OF NEW CLONES OF HAZELNUT CULTIVARS BY GRAFTING ONTO TURKISH FILBERT ROOTSTOCK
- P1_05 *Marina Mačukanović Jocić, Dragana Rančić*
THE MORPHOLOGICAL FEATURES OF CORNELIAN CHERRY (*Cornus mas* L., Cornaceae) POLLEN GRAINS
- P1_06 *Dragana Rančić, Marina Mačukanović Jocić, Radenko Radošević*
THE POSITION, MORPHOLOGY, AND STRUCTURE OF FLORAL NECTAR-SECRETING GLAND IN *Cornus mas* L. (Cornaceae)
- P1_07 *Božana Odžaković, Vanja Čupina, Slavica Grujić, Staniša Latinović, Zoran Kukrić*
DEVELOPMENT, QUALITY AND ANTIOXIDANT ACTIVITY OF CORNELIAN CHERRY FRUIT GELS
- P1_08 *Danilo Vidović, Boris Pašalić*
IMPACT OF BIOFUNGICIDES IN POSTHARVEST AND STORAGE OF CHERRY FRUITS

P1_09	<i>Snežana Stevanović, Ana Plečić, Tanja Petrović, Simo Stevanović, Aleksandar Leposavić, Milena Otović, Uroš Milovančević</i>	THE EFFECT OF FREEZING AND FROZEN STORAGE ON THE QUALITY AND ANTIOXIDANT ACTIVITY OF RASPBERRY AND BLACKBERRY FRUITS
P1_10	<i>Ivanka Ćirić, Dragana Dabić Zagorac, Milica Sredojević, Milica Fotirić Akšić, Biljana Rabrenović, Stevan Blagojević, Maja Natić</i>	VALORIZATION OF RASPBERRY SEEDS IN COSMETIC INDUSTRY
P1_11	<i>Maja Natić, Milica Fotirić Akšić, Lazar Pejić, Ivanka Ćirić, Dragana Dabić Zagorac, Milica Sredojević, Biljana Rabrenović</i>	BIOACTIVE COMPOUNDS OF COLD-PRESSED RASPBERRY SEED OIL AND FUNCTIONAL PROPERTIES OF THE REMAINING OIL CAKE
P1_12	<i>Dragana Dabić Zagorac, Ivanka Ćirić, Milica Sredojević, Milica Fotirić Akšić, Biljana Rabrenović, Aleksandra Pavlović, Maja Natić</i>	UTILIZATION OF AGRICULTURAL WASTE IN BIOSORPTION OF ANTHOCYANINS
P1_13	<i>Zoran Maličević, Milan Jugović</i>	STATUS OF PESTICIDE APPLICATION EQUIPMENT AND THE POSSIBILITY OF APPLYING EUROPEAN STANDARDS AND REGULATIONS
P1_14	<i>Vojislav Trkulja, Gordana Babić, Bojana Ćurković, Bojana Vuković, Jovana Prijić, Bogdan Nedić, Aleksandra Dobričanin</i>	SURVEY ON THE PRESENCE OF <i>Alternaria mali</i> , THE CAUSAL AGENT OF APPLE ALTERNARIA BLOTCH, IN REPUBLIC OF SRPSKA DURING 2019-2023
P1_15	<i>Nadja Milutinović, Uroš Vojinović, Aleksandra Bešlić, Nataša Duduk, Ivana Vico, Milan Stević</i>	IN VITRO TOXICITY OF FLUDIOXONIL TO <i>Penicillium expansum</i> AND <i>Penicillium crustosum</i> ISOLATES FROM DECAYED APPLE FRUIT
P1_16	<i>Slavica Vuković, Antonije Žunić, Dragana Šunjka, Sanja Lazić, Aleksandra Šušnjar, Dragana Bošković, Jelena Ećimović</i>	CONTROL OF <i>Cacopsylla pyri</i> L. IN A PEAR ORCHARD USING INSECTICIDES
P1_17	<i>Tamara Popović, Jelena Adamović, Anđelka Prokić, Milan Ivanović, Aleksa Obradović</i>	ETIOLOGY OF HAZELNUT (<i>Corylus avellana</i>) BACTERIAL BLIGHT IN MONTENEGRO
P1_18	<i>Biljana Lolić, Stefani Tepić, Sonja Umičević, Marina Antić</i>	DETECTION OF PHYTOPHTHORA IN STRAWBERRY PLANTS BY POLYMERASE CHAIN REACTION
P1_19	<i>Dragoslava Bjelošević, Duška Delić</i>	THE INFLUENCE OF DIFFERENT WEED CONTROL APPROACHES ON THE YIELD OF STRAWBERRY (<i>Fragaria ananassa</i> D.)
P1_20	<i>Danijela Ristić, Ivan Vučurović, Jovana Blagojević, Vukašin Keserović, Mira Starović, Nenad Trkulja, Goran Aleksić</i>	EFFICACY EVALUATION OF SYNTHETIC FUNGICIDES AND BIOFUNGICIDES AGAINST FUSARIUM WILT IN BLUEBERRY
P1_21	<i>Marina Dervišević, Dejana Stanić, Draga Graora</i>	DIVERSITY OF COCCINELLIDAE IN COLONIES OF SOFT SCALES (HEMIPTERA: COCCIDAE)
P1_22	<i>Dušanka Jerinić-Prodanović, Dragica Smiljanić</i>	A CONTRIBUTION TO THE KNOWLEDGE OF TRUE FRUIT FLIES (DIPTERA: TEPHRITIDAE) IN SERBIA
P1_23	<i>Stefani Tepić, Anica Maksić, Nikola Grujić, Branimir Nježić</i>	LEARNING AND MEMORY IN NEMATODES
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P1_25	<i>Dunja Sotonica, Marija Ćosić, Ružica Stričević, Miloš Pajić, Mirjam Vujadinović Mandić, Jelena Ivanović, Željko Dželetović, Aleksa Lipovac</i>	REMOTE SENSING ASSESSMENT OF IRRIGATION IMPACT ON VINEYARD WATER STATUS

P1_26	<i>Radmila Ilić, Mirjana Radovanović, Gorica Paunović, Ivan Glišić, Vesna Đurović, Tomo Milošević</i> FRUIT CHARACTERISTICS OF SOME WALNUT CULTIVARS (<i>Juglans regia</i> L.)
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P1_28	<i>Tatjana Jovanović Cvetković, Srđan Bojbaša, Rada Grbić</i> CHARACTERISTICS OF TABLE GRAPE VARIETIES GROWN IN THE HERZEGOVINA REGION
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Present status of *Acidovorax citrulli* - causing Bacterial Fruit Blotch of watermelon fruits in North Macedonia

Emilija Arsov¹, Sasa Mitrev¹

¹ Faculty of Agriculture, Goce Delcev University, Stip, North Macedonia

Corresponding author: Emilija Arsov, emilija.arsov@ugd.edu.mk

Abstract

Acidovorax citrulli is the causal agent of Bacterial Fruit Blotch (BFB) of cucurbit plants. So far, *A. citrulli* has been added to the EPPO A1 List version 2023-09. Despite the economic importance of the disease, little is known about the basic aspects of *A. citrulli* pathogenesis. In the late spring months of 2020 to 2022, the appearance of fruit blotch symptoms on fully ripened watermelon crops, attributed to *A. citrulli* was documented. In our research, we conducted a comprehensive analysis utilizing various methods including observation of fruit symptoms, pathogenicity assessment on young watermelon fruit and seedlings, as well as biochemical tests, ELISA test, and Real-time PCR analyses, all compared with positive controls. As a result of this thorough examination done for the first time, we have conclusively identified the pathogen responsible for the observed symptoms as *A. citrulli*, the causal agent of BFB in watermelon fruits. The bacterium was isolated from fruit tissue and colonies were visible after a few days, such as wet mount formed smooth, round, small cream-coloured, non-fluorescent colonies on King's B medium with basic characteristics such as gram-negative, rod-shaped, aerobic, and oxidase-positive. A total of 20 isolates were subjected to characterization through physiological, biochemical, and pathogenicity tests. For identification and comparison, PCR analyses were conducted using *A. citrulli*-specific primer pairs. In the area under investigation, it was determined that there were substantial economic losses, reaching up to 70%. Because of the costly lawsuits and lack of efficient management, BFB represents a serious threat to the cucurbit industry. As this pathogen is on the EPPO A1 List, we already informed our Ministry of Agriculture, and all the farmers that grow watermelon, about *A. citrulli* that it is very important to implement eradication measures to prevent the further spread of this bacterium across the region.

Key words: fruit blotch symptoms, watermelon fruit, biochemical tests, PCR analyses

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