



**XII INTERNATIONAL SYMPOSIUM ON
AGRICULTURAL SCIENCES**

BOOK OF ABSTRACTS

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**XII INTERNATIONAL
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AGRICULTURAL SCIENCES**

**24-26, May, 2023
Trebinje
Bosnia and Herzegovina**

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24-26. May, 2023; Trebinje, Bosnia and Herzegovina

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PROGRAM OVERVIEW

Wednesday 24 May, 2023		
16:00 – 19:00	Symposium registration	Coloseum
17:00 – 17:30	Opening ceremony	Hall 2
17:30 – 18:45	Plenary lectures	
19:00	Coctail	Konoba Etno selo
Thursday 25 May, 2023		
08:30 – 17:00	Symposium registration	Coloseum
09:00 – 09:50	Plenary lectures	Hall 2
10:00 – 11:45	Session: Agricultural economics and rural development 1	Hall 1
10:00 – 12:00	Session: Horticulture 1	Hall 2
11:45 – 12:30	Coffee break	Hotel Panorama
12:15 – 14:10	Session: Agricultural economics and rural development 2	Hall 1
12:30 – 14:00	Session: Horticulture 2	Hall 2
14:00 – 16:00	Lunch break	Hotel Panorama
15:30 – 17:00	Workshop 1: Ecosystem services: not only benefits for environment, but also financial revenues for farmers	Hall 2
17:00 – 18:00	Workshop 2: What is needed to make research capacities in agricultural water management grow?	Hall 1
20:00	Cultural event	Dom kulture Trebinje
Friday 26 May, 2023		
08:30 – 17:00	Symposium registration	Coloseum
09:00 – 09:50	Plenary lectures	Hall 2
10:00 – 11:40	Session: Crop Science 1	Hall 2
10:00 – 11:15	Session: Animal Science	Hall 1
11:15 – 12:15	Coffee break	Hotel Panorama
12:15 – 14:00	Session: Crop Science 2	Hall 2
12:00 – 13:30	Session: Horticulture 3	Hall 1
14:00 – 16:00	Lunch break	Hotel Panorama
16:00 – 18:00	XXVIII savjetovanje inženjera poljoprivrede Republike Srpske	Hall 2
20:00	Galla evening	Hotel Panorama

SCIENTIFIC PROGRAM

Wednesday, May 24

OPENING CEREMONY		The City of Sun'Trebinje	Hall 2
17:00 – 17:30	<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 for Scientific and Technological Development, Higher Education and Information Society; ➤ Mirko Ćurić, Mayor of the Trebinje City; ➤ Branimir Nježić, President of the Organizing Committee. 		
PLENARY LECTURES		The City of Sun'Trebinje	Hall 2
	Chair: Borut Bosančić		
17:30 –18:00 PL_01	Guido D'Urso EARTH OBSERVATION FOR CROP WATER REQUIREMENTS FROM THE FIELD TO THE REGIONAL SCALE: FROM RESEARCH TO OPERATIONAL APPLICATIONS		
18:00 –18:30 PL_02	Carmelo Rapisarda IMPACT OF CLIMATE CHANGE ON INSECT PESTS AND THEIR MANAGEMENT: A CHALLENGE FOR FUTURE CROP PROTECTION		
18:30 –19:00 PL_03	Dimitrije Markovic PLANT RESPONSE TO TOUCH - ECOLOGICAL AND AGRONOMIC IMPLICATIONS		
19:00	Coctail		Konoba Etno selo

Thursday, 25 May

PLENARY LECTURES		Hall 2
Chair: Željko Vaško		
09:00 – 09:25 PL_04	Fernández-Lorenzo, Juan Luis IN VITRO MICROGRAFTING: SWEET CHESTNUT AND MULBERRY AS CASE STUDIES	
09:25 – 09:50 PL_05	Karmen Pažek METHODS AND TOOLS FOR DECISION SUPPORT IN AGRICULTURAL MANAGEMENT	

SESSION: HORTICULTURE 1		Hall 2
Chair: Viktor Gjamovski, Boris Pašalić, Boban Đorđević		
10:00-10:15 O2_01	Eligio Malusa, Invited lecture SOIL MANAGEMENT IN ORGANIC FRUIT PRODUCTION: AN AGROECOLOGICAL APPROACH	
10:15-10:25 O2_02	Gordana Đurić OPEN ISSUES OF KNOWLEDGE TRANSFER IN FRUIT GROWING IN BOSNIA AND HERZEGOVINA	
10:25-10:35 O2_03	Gordana Đurić, Jelena Davidović Gidas CHALLENGES IN APPLE PLANTING MATERIAL PRODUCTION AND EXPORT IN BOSNIA AND HERZEGOVINA	
10:35-10:45 O2_04	Miljan Cvetković, Jelisaveta Seka Cvijanović INFLUENCE OF PLUM VARIETY ON THE MECHANIZED PRUNING EFFICIENCY	
10:45-10:55 O2_05	Nataša Čereković, Majken Pagter, Hanne Lakkenborg Kristensen, Hanne Lindhard Pedersen, Rex Brennan, Karen Koefoed Petersen THE EFFECT OF IRRIGATION DURING FLOWER INITIATION AND FLOWERING TIME ON BLACKCURRANT	
10:55-11:05 O2_06	Miljan Cvetković, Petar Nikolić, Milan Šipka IOT BASED DIGITAL FARM MANAGEMENT FOR ORCHARD	
11:05-11:15 O2_07	Vuk Pavić, Mirko Jokić DEVELOPMENT OF AUTOMATIC PEST TRAP BASED ON IOT (INTERNET OF THINGS) TECHNOLOGIES	
11:15-11:45	Poster presentations: P2_01 – P2_17	
11:45-12:00	Discussion	
12:00-12:30	Coffee break	

Chair: Dragan Nikolić, Dushko Nedelkovski, Darko Jakšić

12:30-12:45 O2_09	Darko Jakšić, Veljko Perović, Ivan Bradić, Jordana Ninkov, Vesna Maraš, Pierfederico La Notte, Mirjam Vujadinović Mandić, Invited lecture THE APPLICATION OF ADVANCED TECHNOLOGIES IN THE RESEARCH OF TERROIR FACTORS IN VITICULTURE AND OENOLOGY
12:45-12:55 O2_10	Vanja Miljanić, Jernej Jakše, Denis Rusjan, Andreja Škvarč, Nataša Štajner HIGH-THROUGHPUT SEQUENCING AND MULTIPLEX RT-PCR FOR DIAGNOSTICS OF GRAPEVINE VIRAL PATHOGENS
12:55-13:05 O2_11	Veroslava Kocić, Dušica Čirković, Dragana Stanisavljević, Dobila Ranđelović, Milica Stojanović, Jelica Lazić Saković, Aleksandar Veličković THE INFLUENCE OF RAW MATERIALS AND THE PRODUCTION PROCESS ON THE QUALITY OF ROSÉ WINE
13:05-13:15 O2_12	Stefan Gordanić, Dragoja Radanović, Snežana Mrđan, Jelena Golijan-Pantović, Sara Mikić, Željana Prijić, Tatjana Marković EXAMINATION OF THE INFLUENCE OF SOIL TYPE ON THE YIELD AND MORPHOLOGICAL PARAMETERS OF <i>Mellisa officinalis</i>
13:15-13:25 O2_13	Milena Lakićević, Lazar Pavlović, Saša Orlović, Emina Mladenović INVENTARISATION OF THE WOODY PLANTS IN NOVI SAD
13:25-13:45	Poster presentations: P2_18 –P2_42
13:45-14:00	Discussion

SESSION: AGRICULTURAL ECONOMICS AND RURAL DEVELOPMENT 1

Hall 1

Chair: Vesna Mrdalj, Branislav Vlahović, Črtomir Rozman

10:00-10:15 O3_01	Hrabrin Bachev, Bozidar Ivanov, Invited lecture ABOUT THE GOOD GOVERNANCE OF BULGARIAN AGRICULTURE
10:15-10:25 O3_02	Veselin Krastev FARM SUSTAINABLE DEVELOPMENT OF THE EU NEW MEMBER STATES
10:25-10:35 O3_03	Carsten Hümmer, Marius Funk, Markus Dirschl, Matthias Schneider, Dragan Brkovic, Peter Breunig, Johannes Holzner ECONOMICS AND INNOVATIONS IN MILK PRODUCTION AND PROCESSING IN GERMANY UP TO 2030 - PROSPECTS AND CHALLENGES

10:35-10:45 O3_04	Gordana Rokvić Knežić, Ljiljana Drinić, Miljan Erbez ANALYSIS OF INDICATORS OF RURAL DEVELOPMENT OF SELECTED MUNICIPALITIES IN THE REPUBLIC OF SRPSKA
10:45-10:55 O3_05	Željko Vaško, Marko Ivanković, Suzana Madžarić, Nemanja Jalić MODELLING OF ADDITIONAL RANKING OF AREAS WITH NATURAL CONSTRAINTS IN BOSNIA AND HERZEGOVINA
10:55-11:05 O3_06	Katerina Kareska, Silvana Pashovska ECONOMIC INDICATORS FOR THE SUSTAINABILITY OF TOBACCO PRODUCTION IN THE REPUBLIC OF NORTH MACEDONIA
11:05-11:15 O3_07	Črtomir Rozman ECONOMICS OF IRRIGATION IN NORTH-EASTERN SLOVENIA
11:15-11:25 O3_08	Nataša Vukelić, Vesna Pavlović, Nebojša Novković, Veljko Šarac, Beba Mutavdžić MANAGERIAL CAPACITIES OF MILK PRODUCERS IN TITEL MUNICIPALITY
11:25-11:35 O3_09	Dragan Dokić, Vera Popović, Vesna Gantner THE SIGNIFICANCE OF THE FISCAL RELIEF OF WHEAT AND CORN PRODUCTION IN THE FUNCTION OF PROTECTING THE FOOD MARKET IN THE REPUBLIC OF CROATIA
11:35-11:45	Discussion
11:45-12:15	Coffee break

SESSION: AGRICULTURAL ECONOMICS AND RURAL DEVELOPMENT 2	Hall 1
Chair: Gordana Rokvić Knežić, Hrabrin Bachev, Nebojša Novković	
12:15-12:25 O3_10	Branislav Vlahović, Anton Puškarić FOREIGN TRADE OF WINE IN THE REPUBLIC OF SERBIA
12:25-12:35 O3_11	Aleksandar Ostojić, Luka Vračar, Nemanja Jalić CONSUMER ATTITUDES ABOUT PURCHASING AND CONSUMING VEGETABLES
12:35-12:45 O3_12	Nemanja Jalić, Nikola Ružević, Aleksandar Ostojić Z GENERATION ATTITUDES AND OPINIONS ABOUT BEER
12:45-12:55 O3_13	Nistoroiu Bianca Florentina, Nicolae Iuliana GENDER TRENDS IN MODERN AGRICULTURE: THE CASE OF FEMALE FARMERS IN EUROPE
12:55-13:05 O3_14	Blagoje Paunović, Nebojša Novković EVALUATING OF ENVIRONMENTAL IMPACT IN COST BENEFIT ANALYSIS OF INVESTMENT PROJECTS IN AGRICULTURE
13:05-13:15 O3_15	Branislav Raketic CHALLENGES FOR THE FURTHER DEVELOPMENT OF THE ORGANIC SECTOR IN WESTERN BALKAN COUNTRIES/TERRITORIES

13:15-13:25 O3_16	Senka Ždero, Zorica Srđević, Bojan Srđević SELECTING SOCIO-ENVIRONMENTAL INDICATORS TO UNDERSTAND THE EFFECTS OF DROUGHT ON RAMSAR SITES
13:25-13:35 O3_17	Gvozden Mićić, Dimitrije Marković, Gordana Đurić TOOL FOR AGROECOLOGY PERFORMANCE EVALUATION TESTING IN BOSNIA AND HERZEGOVINA
13:35-13:45	Discussion
	Chair: Željko Vaško, Katerina Kareska, Dragan Brković
13:45-13:55	Poster presentations: P3_01 – P3_09
13:55-14:10	Discussion

	WORKSHOP 1	Hall 2
15:30-17:00	ECOSYSTEM SERVICES: NOT ONLY BENEFITS FOR ENVIRONMENT, BUT ALSO FINANCIAL REVENUES FOR FARMERS - SUPPORTED BY THE PROJECT EU4FITO-BiH	
	Chair: Branimir Nježić	
	Eligio Malusa SUSTAINABLE USE OF IPM	
	Eduardo Ucciero PLANT HEALTH - A COMMON AFFAIR OF THE ENTIRE SOCIETY	
	Petar Nikolić WILD BEES, VITAL POLINATORS IN OUR ECOSYSTEM	
	Branimir Nježić ENTOMOPATOGENIC NEMATODES IN MANAGEMENT OF INSECT PESTS	
	Discussion	

	WORKSHOP 2	Hall 1
15:30-17:30	WHAT IS NEEDED TO MAKE RESEARCH CAPACITIES IN AGRICULTURAL WATER MANAGEMENT GROW? - SUPPORTED BY THE PROJECT SMARTWATER	
	Chair: Enrique Playán	

Friday 26 May, 2023

	PLENARY LECTURES	Hall 2
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Chair: Sava Vrbničanin

09:00 – 09:25	PL_06	Jovan Pavlov, Nenad Delić, Sofija Božinović, Zoran Čamdžija, Nikola Grčić CURRENT TRENDS IN MAIZE BREEDING AT MAIZE RESEARCH INSTITUTE “ZEMUN POLJE”
09:25 – 09:50	PL_07	Ivana Tlak Gajger THE RELATIONSHIP BETWEEN NUTRITION AND THE HEALTH OF HONEYBEE COLONIES

	SESSION: CROP SCIENCE 1	Hall 2
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Chair: Novo Pržulj, Sava Vrbničanin

10:00-10:15	O1_01	Nataša Čereković, Vojo Radić, Jovana Žunić, Mladen Babić, Milan Šipka, Marinko Vekić, Goran Banović, Sandra Petković, Mladen Todorović, Nery Zapata, Teresa Afonso do Paço, Wilk Almeida, Sabrija Čadro, Benjamin Crljenković, Mihajlo Marković, Invited lecture IRRIGATION AND NITROGEN APPLICATION FOR IMPROVING MAIZE YIELD GROWN AT DIFFERENT LOCATIONS IN BOSNIA AND HERZEGOVINA
10:15-10:30	O1_02	Zoran Bročić, Jasmina Oljača, Danijel Pantelić, Jelena Rudić, Dobrivoj Poštić, Ivana Momčilović, Invited lecture EFFECTS OF CULTIVAR AND PLANT ORIGIN ON THE AEROPONIC PRODUCTION OF POTATO MINITUBERS
10:30-10:40	O1_03	Enrique Playán, Nataša Čereković, Alen Mujčinović, Mihajlo Marković, Mladen Todorovic, Željko Vaško, Nevena Stojaković, Sabrija Čadro, Teresa Afonso do Paço, Wilk Almeida, Farida Dechmi, Piluca Paniagua, Nery Zapata A ROADMAP TO CONSOLIDATE AGRICULTURAL WATER MANAGEMENT RESEARCH IN BOSNIA-HERZEGOVINA
10:40-10:50	O1_04	Snežana Brajević, Željko Dželetović, Aleksandar Simić, Gordana Andrejić, Marija Čosić, Uroš Aleksić ORGANIC CARBON STOCK AND SUSTAINABLE LAND USE UNDER PERMANENT GRASSLANDS IN ZLATIBOR MOUNTAIN

10:50-11:00 O1_05	Danijela Kondić, Stevan Trivković, Desimir Knežević, Zoran Bročić INTERACTION OF AGRONOMIC TREATMENTS IN A FUNCTION OF WINTER WHEAT YIELD
11:00-11:10 O1_06	Helena Majstorović, Bogdan Garalejić, Maja Sudimac, Babka Jan, Miloš Pavlović PHOSPHORUS CONTENT AND STRATIFICATION IN THE SOIL LAYER 0-30 CM IN CONVENTIONAL (CT) AND NO-TILL (NT) TILLAGE SYSTEMS LONG TERM EXPERIMENT
11:10-11:20 O1_07	Bozhidar Ivanov, Daniela Tsvyatkova COMPARATIVE ANALYSIS OF SLUDGE UTILIZATION IN AGRICULTURE IN EU COUNTRIES
11:20-11:35	Poster presentations: P1_01 – P1_17
11:35-11:45	Discussion
11:45-12:15	Coffee break

	SESSION: CROP SCIENCE 2	Hall 2
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Chair: Anđa Radonjić, Ljiljana Brbaklić	
12:15-12:30 O1_08	Dragan Perović, Yu Cai, Robert HOFFIE, Peter Dracatos, Invited lecture FROM GERMPASM SCREENING TO GENETICS AND GENOME EDITING IN BARLEY LEAF RUST RESISTANCE BREEDING
12:30-12:45 O1_09	Desimir Knežević, Danijela Kondić, Aleksandra. Yu. Novoselskaya Dragovich, Alexander M. Kudryavtsev, Mirela Matković Stojšin, Veselinka Zečević, Adriana Radosavac, Aleksandar Paunović, Invited lecture VARIABILITY OF WHEAT TECHNOLOGICAL QUALITY PROPRIETIES AND THEIR RELATIONSHIPS WITH GLIADIN AND GLUTENIN ALLELES
12:45-13:00 O1_10	Anđa Radonjić, Olivera Petrović-Obradović, Invited lecture MONITORING OF APHIDS AS VECTORS OF VIRUSES IN FIELD CROPS IN SERBIA
13:00-13:10 O1_11	Cody Watzig, Francesco Vuolo, Aleksandar Dujakovic, Andreas Schaumberger, Andreas Klingler IMPROVING GRASSLAND CUT DETECTION METHODOLOGY BASED ON SENTINEL-2 TIME SERIES TO RESPOND TO THE CHALLENGES OF THE AUSTRIAN GRASSLAND PRODUCTION
13:10-13:20 O1_12	Ahmad Ratib Sharafat INFLUENCE OF DIMETHYL SULFOXIDE ON THE PRODUCTION OF EMBRYOS AND GREEN PLANTS FROM ANTHERS CULTURE OF WHEAT (<i>Triticum aestivum</i> L.)

13:20-13:30 O1_13	Ranko Gantner, Zvonimir Steiner, Vesna Gantner LOW-INPUT FARMING FOR AGRICULTURAL SUSTAINABILITY
13:30-13:40 O1_14	Snežana Gošić Dondo, Dragan Grčak, Željko D. Popović, Danijela Ristić, Milosav Grčak, Danijela Kondić, Desimir Knezevic VARIABILITY OF DAMAGE IN MAIZE GENOTYPES CAUSED BY ATTACK CORN BORER <i>Ostrinia nubilalis</i> HBN.
13:40-14:00	Poster presentations: P1_18 – P1_33
14:00-14:10	Discussion

	SESSION: HORTICULTURE 3	Hall 1
Chair: Mirjana Ljubojević, Dragana Šunjka, Branimir Nježić		
12:30-12:45 O2_14	Mirjana Ljubojević, Goran Barać, Tijana Narandžić, Jovana Ostojić, Biljana Božanić Tanjga, Milica Grubač, Magdalena Pušić, Invited lecture REMODELING HORTICULTURAL PLANTS' BREEDING TO MEET SUSTAINABLE DEVELOPMENT GOALS	
12:45-12:55 O2_15	Ranko Sarić, Snežana Branković EFFECT OF WEED CONTROL IN A POPLAR PLANTATION CLONE <i>Populus x euramericana</i> 'I-214'	
12:55-13:05 O2_16	Dragana Šunjka, Sanja Lazić, Slavica Vuković, Antonije Žunić, Aleksandra Šušnjar DIETARY RISK ASSESSMENT OF DIAMIDE INSECTICIDES IN PEACH FRUITS	
13:05-13:15 O2_17	Zorana Đekanović, Đorđe Kusalović, Nevena Jokić, Jovana Radić, Relja Suručić, Vojo Radić, Ranko Škrbić, Duška Delić EVALUATION OF EFFICACY OF SOME PLANT EXTRACTS FOR THE CONTROL OF FUSARIUM WILT (<i>Fusarium oxysporum</i>) AND ALTERNARIA LEAF SPOT (<i>Alternaria alternata</i>)	
13:15-13:25 O2_18	Milan Ivanović, Milan Šević, Anđelka Prokić, Jelena Adamović, Aleksa Obradović USE OF ANTIBIOTICS IN CROP PROTECTION: YES OR NO?	
13:25-13:35 O2_19	Dragana Marinković EFFECTS OF IONIZING RADIATION ON FOOD	
13:30-13:45	Poster presentations: P2_43 - P2_61	
13:45-14:00	Discussion	

SECTION: ANIMAL SCIENCES		Hall 1
Chair: Ivana Tlak Gajger, Đorđe Savić, Vesna Gantner		
10:00-10:15 O4_01	Vesna Gantner, Biljana Rogić, Invited lecture THE IMPORTANCE OF EDUCATION IN THE FIELD OF AGRICULTURE IN TERMS OF CHANGES OF CLIMATE	
10:15-10:25 O4_02	Aleksandar Ignjatović, Kazimir Matović, Goran Jevtić, Nebojša Nedić THE INFLUENCE OF GEOGRAPHICAL AREA ON MORPHOMETRIC PARAMETERS OF HONEY BEE IN SERBIA	
10:25-10:35 O4_03	Stoja Jotanović, Predrag Ilić, Slaven Grbić, Jasmin Kazazović CHANGE IN PULSE FREQUENCY IN HORSES AS AN INDICATOR OF STRESS CAUSED BY LOADING	
10:35-10:45 O4_04	Vesna Gantner, Ivana Jožef, Dragan Solić, Ranko Gantner, Zvonimir Steiner VARIABILITY OF MASTITIS OCCURRENCE IN DAIRY SIMMENTALS DUE TO RECORDING TIME	
10:45-11:00	Poster presentations: P4_01 – P4_15	
11:00-11:15	Discussion	
11:15-11:45	Coffee break	

XXVIII SAVJETOVANJE INŽENJERA POLJOPRIVREDE REPUBLIKE SRPSKE		Hall 2
Stručno savjetovanje na temu: “Proizvodnja, arome i greške u voćnim destilatima”		
Moderator: Božana Odžaković		
Pozdravna riječ: Zlatan Kovačević i Borut Bosančić		
Izlagrač: Branko Drljača		
16:00-17:30	Proizvodnja (Sirovina; Enološki aditivi; Fermentacija; Destilacija) Arome (Izvor i formiranje aroma; Tipične arome voćnih destilata, Arome iz bureta) Greške u destilatima (Najčešće greške; Uzrok i formiranje; Greške iz radnih faza)	

LIST OF THE POSTERS

SESSION: CROP SCIENCE 1	
P1_01	Dushko Mukaetov, Hristina Poposka, Marjan Andreevski SPATIAL ASSESSMENT OF SOIL ORGANIC CARBON CONTENTS UNDER DIFFERENT LAND USE TYPES IN OHRID VALLEY
P1_02	Radoš Zemunac, Milica Vranešević, Boško Blagojević, Radovan Savić, Atila Bezdán, Stanko Milić, Andrea Salvai TRENDS OF KEY IRRIGATION WATER QUALITY PARAMETERS IN THE ENDANGERED WATERCOURSES IN VOJVODINA (SERBIA)
P1_03	Vojo Radic, Ilija Komljenovic, Borislav Petkovic, Nikola Krstovic INFLUENCE OF IRRIGATION ON SEED PRODUCTION OF MAIZE HYBRIDS IN DRY SEASONS
P1_04	Ivica Đalović, Aleksandar Paunović NITROGEN FERTILIZATION AND HYBRID INTERACTIONS ALONG CLIMATIC CONDITIONS DETERMINE MAIZE YIELD IN CALCAREOUS SOIL
P1_05	Nikola Grčić, Zoran Čamdžija, Jovan Pavlov, Milomir Filipović, Sofija Božinović, Marko Mladenović ZP 4019- A NEW MAIZE HYBRID DEVELOPED USING DOUBLED HAPLOID (DH) TECHNOLOGY
P1_06	Milan Biberdžić, Jelena Stojiljković, Vera Đekić, Saša Barać, Dragana Lalević, Milomirka Madić THE IMPORTANCE OF HYBRIDS AND SOWING DENSITY ON MAIZE YIELD IN THE SOUTHERN PART OF SERBIA
P1_07	Dalibor Tomić, Vladeta Stevović, Ivan Marković, Miloš Marjanović, Nenad Pavlović, Mirjana Petrović, Vladimir Zornić, Đorđe Lazarević, Jasmina Knežević FORAGE YIELD AND YIELD COMPONENTS OF SUDAN GRASS DEPENDING ON SOWING DENSITY
P1_08	Đorđe Todić RESULTS OF BREEDING WORK ON SMALL GRAINS AT THE AGRICULTURAL INSTITUTE OF THE REPUBLIC OF RRPSKA
P1_09	Andreas Schaumberger, Aleksandar Dujaković, Francesco Vuolo, Andreas Klingler, Cody Watzig SATELLITE-BASED MODELLING OF GRASSLAND YIELD AND QUALITY DYNAMICS (SATGRASS)
P1_10	Sanja Mikić, Verica Takač, Ljiljana Brbaklić, Milan Mirosavljević, Dušan Trajković, Nataša Buha, Maja Šumaruna ESTIMATION OF YIELD POTENTIAL OF LOCAL WHEAT LANDRACES WITH NDVI, FLAG LEAF AREA AND CHLOROPHYLL CONTENT
P1_11	Borislav Petković, Ilija Komljenović, Vojo Radić, Darko Aćimović VARIATION OF SILAGE YIELD OF MAIZE HYBRIDS ON SOILS OF POOR FERTILITY IN HILLY AREAS

P1_12	Zoran Čamdžija, Aleksandar Popović, Vojka Babić, Natalija Kravić, Jovan Pavlov, Nikola Grčić, Milomir Filipović EVALUATION OF COMBINING ABILITIES OF LOCAL MAIZE LANDRACES FOR STARCH, PROTEIN AND OIL CONTENT IN GRAIN
P1_13	Željko Dolijanović, Snežana Oljača, Milena Simić, Vesna Dragičević, Zoran Jovović THE EFFECT OF DIFFERENT MICROBIAL FERTILIZER ON THE WEEDINESS OF MAIZE
P1_14	Gorica Cvijanović, Vesna Stepić, Marija Bajagić, Vojin Đukić, Jovana Sekulić, Nenad Đurić, Zlatica Miladinov Mamlić THE INFLUENCE OF THE APPLICATION OF EFFECTIVE MICROORGANISMS ON THE WEIGHT OF 1000 GRAINS AND THE YIELD OF DIFFERENT MAIZE GENOTYPES
P1_15	Marija Gavrilović, Ranko Koprivica, Miloš Zelić, Biljana Veljković, Zoran Mileusnić, Branislav Dudić, Aleksandra Dimitrijević Petrović ENERGY EQUIPMENT WITH TRACTORS IN THE COOPERATIVE "AGROPROM"
P1_16	Zoran Malicevic, Milan Jugovic ASSESSMENT OF THE QUALITY OF WORK OF AGGREGATES FOR BASIC TILLAGE
P1_17	Pawel Plottek, Rafał Ramut, Stanislaw Minta INNOVATIONS IN AGRICULTURE - RAPE SEED DRILL BASED ON AN AFTER-CROP SEEDER AS AN EXAMPLE OF FARMER' HIMSELF INNOVATION
	SESSION: CROP SCIENCE 2
P1_18	Ljiljana Brbaklić, Sanja Mikić, Milan Mirosavljević, Radivoje Jevtić, Vladimir Aćin, Dragan Živančev, Vera Popović ON-FARM CONSERVATION, MANAGEMENT AND USE OF BARLEY, OATS, RYE AND WHEAT GENETIC RESOURCES IN SERBIA
P1_19	Petr Konvalina, Trong Nghia Hoang WINTER WHEAT MIXTURES SYSTEM AS THE WAY FOR STABILIZATION OF YIELD AND INCREASE OF GRAIN QUALITY IN ORGANIC FARMING
P1_20	Jelena Golijan Pantović, Mile Sečanski, Ljubica Šarčević Todosijević BENEFITS OF ORGANIC FOOD PRODUCTION
P1_21	Jelena Golijan Pantović, Bojan Dimitrijević, Mile Sečanski, Stefan Gordanić ORGANIC SOYA BEAN PRODUCTION IN SERBIA
P1_22	Jelena Golijan Pantović, Bojan Dimitrijević, Aleksandar Popović, Mile Sečanski THE STATE OF ORGANIC BARLEY PRODUCTION IN SERBIA
P1_23	Jelena Golijan Pantović, Stefan Gordanić BIOHERBICIDES IN ORGANIC AGRICULTURE
P1_24	Ivo Mitrushev, Brankica Spaseva, Danica Andreevska, Dobre Andov, Marija Gjosheva Kovachevikj, Gordana Glatkova ASSESSMENT OF SEED VIABILITY IN LONG-TERM STORED <i>Oryza sativa</i> L. ACCESSIONS AFTER MORE THAN A DECADE
P1_25	Ljubica Šarčević-Todosijević, Kristina Vojvodić, Vladimir Filipović, Aleksandra Ivetić, Jelena Golijan, Vera Popović, Dragutin Đukić INFLUENCE OF PESTICIDES ON SOIL MICROORGANISMS
P1_26	Ljubica Šarčević-Todosijević, Marko Vojvodić, Kristina Vojvodić, Aleksandra Ivetić, Snežana Pakić, Vera Popović, Jelena Golijan SIGNIFICANCE AND ECONOMIC JUSTIFICATION OF APPLICATION OF MICROBIOLOGICAL FERTILIZERS IN PLANT PRODUCTION

P1_27	Ljubica Šarčević-Todosijević, Kristina Vojvodić, Vladimir Filipović, Aleksandra Ivetić, Vera Popović, Jelena Golijan, Dragutin Đukić INFLUENCE OF MINERAL FERTILIZERS ON SOIL MICROORGANISMS
P1_28	Vera Karličić, Jelena Jovičić-Petrović, Igor Kljujev, Blažo Lalević, Milan Nikolić, Saud Hamidovic, Vera Raičević ANTIFUNGAL ACTIVITY OF <i>Bacillus amyloliquefaciens</i> D5 ARV
P1_29	Slavica Kerečki, Milica Bogdanović, Igor Kljujev, Jelena Jovičić-Petrović, Vera Karličić, Blažo Lalević, Vera Raičević ROOT COLONIZATION OF DIFFERENT PLANT SPECIES BY <i>Bacillus megaterium</i>
P1_30	Vesna Vidović, Radijana Đekanović, Goran Banović, Branimir Nježić THE IMPACT OF DIFFERENT IRRIGATION AND FERTILIZATION LEVELS ON THE POPULATION AND DAMAGES CAUSED BY <i>Ostrinia nubilalis</i> , HÜBNER (LEPIDOPTERA, CRAMBIDAE)
P1_31	Slavica Vuković, Dragana Šunjka, Sanja Lazić, Antonije Žunić, Dragana Bošković, Aleksandra Sušnjar APPLICATION OF THE INSECTICIDE TEFLUTHRIN FOR THE CONTROL OF ELATERIDAE AND SCARABAEIDAE IN MAIZE CROPS
P1_32	Andrija Vasilčić LABORATORY INVESTIGATION ON INSECTICIDAL EFFICACY OF ALTERNATIVE COMPOUNDS AGAINST RICE WEEVIL
P1_33	Ranko Gantner, Paul Schmit, Zvonimir Steiner, Domagoj Zimmer, Anamarija Banaj, Igor DelVechio, Vesna Gantner FIRST TESTING OF HORSE-DRAWN ROLLER-CUTTER FOR GREEN-MANURE CROPS MANAGEMENT IN CROATIA

SESSION: HORTICULTURE 1

P2_01	Anastasija Đurić, Predrag Ilić, Gordana Đurić FRUIT SET OF TRADITIONAL APPLE CULTIVARS IN THE CONDITIONS OF BANJA LUKA
P2_02	Ivana Radović, Aleksandar Radović, Slađana Savić, Milena Marjanović, Zorica Jovanović MORPHOLOGICAL AND QUALITY ATTRIBUTES OF SELECTED AUTOCHTHONOUS APPLE GENOTYPES FROM SERBIA
P2_03	Danilo Vidović, Nikola Mičić, Gordana Đurić THE INFLUENCE OF THE COMBINATION OF ROOTSTOCK AND INTERSTOCK ON THE INITIAL GROWTH OF THREE SWEET CHERRY CULTIVARS
P2_04	Boris Pašalić, Zlatan Ristić, Marina Antić, Predrag Ilić, Sonja Umičević, David Ducanović, Borut Bosančić POSITIVE EFFECT OF GIBBERELIC ACID TREATMENT ON FRUIT COLOUR IN TWO CHERRY VARIETIES 'NEW STAR' AND 'BING'
P2_05	Melpomena Popovska, Julijana Cvetković, Bojan Popovski PRIMARY EFFECTS OF GAMMA RADIATION (CZ137) ON THE CONTENT OF SOME NUTRITIVE AND BIOACTIVE MATTERS IN THE LEAVES OF SELECTED CHERRY PLANTS
P2_06	Boban Đorđević, Marko Sretenović, Dejan Djurović, Gordan Zec, Nemanja Tešić, Milana Stojanoski INFLUENCES OF <i>Bacillus subtilis</i> AND <i>Trichoderma harzianum</i> TO PRODUCTIVITY AND FRUITS QUALITY OF STRAWBERRY CULTIVAR 'CLERY'

P2_07	Marina Ocokoljić, Tomo Milošević, Jelena Mladenović, Gorica Paunović, Radmila Ilić, Ivan Glišić BIOLOGICAL AND PRODUCTION CHARACTERISTICS OF THE RASPBERRY (<i>Rubus idaeus</i> L.) OF WILLAMETE AND FERTODI ZAMATOS CULTIVARS IN THE PERIOD OF FULL FRUITING
P2_08	Ivana Radovanović, Ljiljana Bošković-Rakočević, Jelena Mladenović, Gorica Paunović, Zoran Dinić, Radmila Ilić THE INFLUENCE OF NITROGEN FERTILIZER APPLICATION ON SOIL CHANGES AND RASPBERRY FRUIT QUALITY
P2_09	Dino Hasanagić, Ivan Samelak EFFECTS OF FREEZE-THAWING ON BIOCHEMICAL PARAMETERS OF PLUM FRUIT QUALITY
P2_10	Božana Odžaković, Vanja Čupina, Slavica Grujić, Staniša Latinović DEVELOPMENT OF GELS FROM CORNELIAN CHERRY FRUIT WITH USE OF DIFFERENT GELLING AGENTS
P2_11	Mohamed El Alaoui, Mohamed Sbaghi FUNCTIONAL RESPONSES OF IMMATURE STAGES OF <i>Cryptolaemus montrouzieri</i> TO THE CACTUS PEAR SPECIFIC SCALE PEST <i>Dactylopius opuntiae</i>
P2_12	Marina Dervišević, Draga Graora <i>Ceroplastes rusci</i> (L.) (HEMIPTERA: COCCIDAE), A NEW SOFT SCALE SPECIES IN SERBIA
P2_13	Dušanka Jerinić-Prodanović, Anđa Radonjić, Dragica Smiljanić, Milica Črkić Matijević WALNUT FLY <i>Rhagoletis completa</i> (CRESSON, 1929) (DIPTERA: TEPHRITIDAE) - FLIGHT DYNAMICS, DISTRIBUTION AND HARMFULNESS IN SERBIA
P2_14	Vojislav Trkulja, Gordana Babić, Bojana Čurković, Bojana Vuković, Jovana Prijić, Bogdan Nedić <i>Geosmithia morbida</i> AND <i>Pityophthorus juglandis</i> SURVEYS, THE CAUSAL AGENT OF THOUSAND CANKERS DISEASE OF WALNUT IN REPUBLIC OF SRPSKA
P2_15	Biljana Lolić, Marina Antić, Tatjana Milaković, Sonja Umićević BACTERIAL DIEBACK OF PEACH AND NECTARINAE CAUSED BY THE QUARANTINE PATHOGEN, <i>Pseudomonas syringae</i> pv. <i>persicae</i> IN THE REPUBLIC OF SRPSKA
P2_16	Dušanka Jerinić-Prodanović, Anđa Radonjić, Milica Črkić Matijević, Dragica Smiljanić CURRENT STATUS OF THE MEDITERRANEAN FRUIT FLY <i>Ceratitis capitata</i> (WIEDEMANN, 1824) (DIPTERA:TEPHRITIDAE) IN SERBIA
P2_17	Stefani Tepić, Anica Živković, Branimir Nježić, Nikola Grujić NEW RECORDS OF <i>Oscheius</i> spp. IN REGION OF BANJA LUKA
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P2_18	Đorđe Boškov, Dragan Milatović, Gordan Zec, Dejan Đurović, Boban Đorđević, Nemanja Tešić, Milana Stojanoski, Dunja Sotonica THE EFFECT OF PACLOBUTRAZOL APPLICATION ON THE GROWTH LENGTH OF FIVE SWEET CHERRY CULTIVARS
P2_19	Biljana Korunoska, Klime Beleski, Vladan Pešić, Nenad Bunjac, Stevan Stojković ANALYSIS OF MEIOSIS IN THE FLOWERS OF SOME VINE VARIETIES USING THE METHOD OF CHIASMA FREQUENCY AND NORMAL CROSSINGOVER

P2_20	Tatjana Jovanović – Cvetković, Nataša Štajner, Tjaša Cesar, Jernej Jakše, Rada Grbić MICROSATELLITE ANALYSIS OF PATERNITIES OF GRAPEVINES AFTER CROSS-POLLINATION
P2_21	Dushko Nedelkovski, Venelin Roychev, Klime Beleski, Hristina Poposka, Dimitar Dimitrov INFLUENCE OF ALTITUDE ON THE AMPELOMETRIC CHARACTERISTICS OF VRANEC VARIETY LEAVES
P2_22	Nebojša Marković, Zoran Pržić, Mitar Popadić COMPARATIVE ANALYSIS OF POTENTIAL CLONES OF THE ŽILAVKA VARIETY IN THE AREA OF THE SUBREGIONS OF MIDDLE NERETVA AND TREBIŠNJICA
P2_23	Darko Jakšić, Ivan Bradić, Radoslav Milić, Federica Bonell, Miloš Ristić, Zlata Vidanović, Ivana Mošić CERTAIN CHARACTERISTICS OF GRAPES AND GRAPE MUST OF THE LOCAL VINE VARIETY BAGRINA
P2_24	Dushko Nedelkovski, Venelin Roychev, Klime Beleski, Dimitar Dimitrov, Viktor Rajčin INFLUENCE OF ALTITUDE ON THE FERTILITY OF THE VINE VARIETY VRANEC
P2_25	Hristina Poposka, Dusko Mukaetov, Dusko Nedelkovski, Milena T. Gjorgjijevski EFFECT OF FOLIAR CALCIUM AND NITROGEN TREATMENTS ON YIELD AND FRUIT QUALITY OF TABLE GRAPES
P2_26	Zorica Ranković-Vasić, Saša Matijašević, Milica Glišić, Mihailo Andrić, Danijela Živojinović, Dragan Nikolić CHARACTERISTICS OF THE NEWLY CREATED TABLE GRAPEVINE VARIETY SIMONA
P2_27	Dunja Sotonica, Marija Čosić, Mirjam Vujadinović Mandić, Zorica Ranković-Vasić, Nevenka Đurović, Aleksa Lipovac, Ružica Stričević, Milana Stojanovski, Anastasiia Chistiakova, Branislav Anđelić THE IMPACT OF THE IRRIGATION REGIMES ON THE RAVAZ INDEX IN VINEYARD PLAVINCI UNDER CLIMATE CHANGE
P2_28	Milena Taseska-Gjorgjijevski, Dushko Nedelkovski, Roze Dzoljevska Milenkovska, Goran Milanov, Klime Beleski, Biljana Korunoska, Viktor Rajčin CONTENT AND CORRELATION OF ORGANIC COMPOUNDS IN SOME AUTOCHTHONOUS GRAPEVINE VARIETIES (<i>Vitis vinifera</i> L.)
P2_29	Biljana Korunoska, Goran Milanov, Milena Taseska-Gjorgjijevski, Duško Nedelkovski, Hristina Trišeska, Roze Dzoljevska Milenkovska, Viktor Rajčin REDUCTION OF THE CONTENT OF HEAVY METALS IN WHITE WINES OF THE ITALIAN RIESLING VARIETY BY CERTAIN TREATMENTS USED IN R.N. MACEDONIA
P2_30	Katerina Bandjo Oreshkovikj, Biljana Kuzmanovska, Rade Rusevski CONTROL EFFECTS OF VARIOUS FUNGICIDES AGAINST POWDERY MILDEW OF GRAPEVINE
P2_31	Katerina Bandjo Oreshkovikj, Rade Rusevski, Biljana Kuzmanovska CONTROL OF <i>Plasmopara viticola</i> WITH THE NOVEL CLASS OF FUNGICIDES
P2_32	Roze Dzoljevska-Milenkovska, Goran Milanov, Milena Taseska-Gjorgjijevski, Dushko Nedelkovski, Klime Beleski, Biljana Korunoska CHEMICAL COMPOSITION OF WINE PRODUCED FROM THE NEWLY INTRODUCED VARIETY REBO (<i>Vitis vinifera</i> L.)

P2_33	Vasiliki Ragkousi, Federica Bonello, Maurizio Petrozziello, Giuseppe Meglioli, Nir Levav MANAGEMENT OF DISSOLVED GASES DURING WINEMAKING AND THEIR EFFECT ON WINE QUALITY AND TYPICITY OF THE AROMA
P2_34	Tatjana Jovanović-Cvetković, Danijela Starčević, Aleksandar Savić, Rada Grbić EFFECT DURATION OF MACERATION AND TEMPERATURE ON CHARACTERISTICS OF RED WINE
P2_35	Aleksandar Petrović, Nikolina Živković, Ivana Plavšić Janjatović, Danka Mitrović, Ivana Sredović Ignjatović EFFECTS OF WINEMAKING TECHNIQUE OF NEWLY CREATED CV. VLADUN ON TOTAL PHENOLIC CONTENT AND ANTI-DPPH RADICAL ACTIVITY OF WINE
P2_36	Sunčica Bodružić, Gordana Đurić DENDROFOND OF THE PARK ARCHITECTURE MONUMENT „UNIVERSITY CITY” - BIOECOLOGICAL BASIS FOR THE VALORISATION OF EXISTING GREEN AREAS
P2_37	Sunčica Bodružić, Nikola Travar, Marina Antić, Jelena Davidovic Gidas, Nataša Pašalić PLANT COLLECTION IN THE BOTANICAL GARDEN OF THE UNIVERSITY OF BANJA LUKA
P2_38	Marko Šušnjara, Boris Dorbić, Emilija Friganović, Željko Španjol, Marko Duvančić, Anita Pamuković PERCEPTIONS OF THE ORNAMENTAL VALUE AND APPLICATION OF SELECTED WEEDS FOR FLOWER BEDS
P2_39	Svjetlana Zeljković, Marina Pekez, Jelena Davidović Gidas, Margarita Davitkovska, Emina Mladenović INFLUENCE OF MICROBIOLOGICAL PREPARATION BACILLOMIX ON THE GERMINATION OF <i>Challistephus chinensis</i> L.
P2_40	Jelena Davidović Gidas, Svjetlana Zeljković, Gordana Đurić USE OF LED LIGHTS IN MICROPROPAGATION OF ROSEMARY (<i>Rosmarinus officinalis</i> L.)
P2_41	Sara Mikić, Željana Prijjić, Vladimir Filipović, Stefan Gordanić, Snežana Mrđan, Ana Dragumilo, Tatjana Marković APPLICABILITY OF DIFFERENT METHODS FOR DISINFECTION OF HERBACEOUS PEONY SEEDS NATIVE TO SERBIA
P2_42	Željana Prijjić, Sara Mikić, Vladimir Filipović, Ana Dragumilo, Stefan Gordanić, Petar Batinić, Natalija Čtović, Tatjana Marković SEED WEIGHT AND OPTIMAL IMBIBITION PERIOD FOR SOME HERBACEOUS PEONY (<i>Paeonia</i> spp.) SPECIES NATIVE TO SERBIA
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P2_43	Slobodan Bandzo SPIDER MITE CONTROL ON MEDICAL CANNABIS MOTHER PLANTS
P2_44	Sonja Umićević, David Ducanović, Borut Bosančić, Marina Antić FRUIT CHARACTERISTICS OF PEPPER ACCESSIONS (<i>Capsicum annuum</i> L.) FROM THE GENE BANK OF THE REPUBLIC OF SRPSKA
P2_45	Lovro Sinkovič, Mojca Škof, Barbara Pipan, Vladimir Meglič MORPHOLOGICAL DIVERSITY OF ONION GENETIC RESOURCES AT THE AGRICULTURAL INSTITUTE OF SLOVENIA

P2_46	Sonja Umićević, Marina Antić, Dragana Rajković, Lovro Sinković, Nevena Nagl, Smiljana Goreta Ban, Vladimir Meglič, Vida Todorović, Ana Marjanović Jeromela, Barbara Pipan MOLECULAR CHARACTERIZATION OF LEAFY KALE GENETIC RESOURCES (<i>Brassica oleracea</i> var. <i>acephala</i> L.)
P2_47	Slađana Savić, Marina Dervišević, Lela Belić, Milena Marjanović, Ivana Radović, Veselinka Zečević, Zorica Jovanović RESPONSE OF TWO TOMATO LINES TO DROUGHT STRESS BASED ON THE PROLINE CONTENT IN FRUITS AND YIELD
P2_48	Vojin Cvijanović, Mladen Petrović, Nebojša Momirović, Đorđe Moravčević, Marija Bajagić THE EFFECT OF DIFFERENT SYSTEMS OF GROWING TOMATOES IN A PROTECTED AREA ON MORPHOLOGICAL PROPERTIES AND BUSINESS RESULTS
P2_49	Biljana Drvoshanova, Afrodita Ibushoska, Katerina Bandjo Oreshkovikj, Hristina Poposka INCREASING CLIMATE RESILIENCE IN PEPPER SEED PRODUCTION THROUGH <i>Trichoderma harzianum</i> AND SOIL FERTILIZER TREATMENTS IN NORTH MACEDONIA
P2_50	Đorđe Moravčević, Sandra Vuković, Sofija Kilibarda, Ana Vujošević, Jelena Pantović, Maja Sudimac, Stefan Gordanić, Aleksandar Ž. Kostić QUALITY OF CUCUMBER SEEDLINGS GROWN IN DIFFERENT SUBSTRATE VOLUMES
P2_51	Tatjana Milaković, Biljana Kelečević, Vida Todorović, Siniša Mitrić INFLUENCE OF PHOTOSYNTHESIS INHIBITORS ON CHLOROPHYLL CONTENT
P2_52	Sandra Vuković, Đorđe Moravčević, Aleksandar Ž. Kostić, Jelica Gvozdanović-Varga, Ana Vujošević, Sofija Kilibarda, Danijel D. Milinčić, Ilinka Pećinar COULD RAMAN MICROSPECTROSCOPY CONFIRM DIFFERENCES OF TWO ALLIUM SPECIES GROWN UNDER DIFFERENT SELENIUM TREATMENTS?
P2_53	Nikolina Đekić, Milica Bosnić, Vida Todorović, Mirjana Žabić ONION PRODUCTION CHARACTERISTICS DEPENDING ON THE SIZE OF ONION SETS AND PLANTING TIME DURING THE PRODUCTION IN THE OPEN FIELD
P2_54	Đorđe Vojnović, Boris Adamović, Žarko Ilin YIELD AND QUALITY OF DIRECTLY SEEDED ONION CULTIVARS
P2_55	Dragan Žnidarčić ANALYZING THE IMPACT OF FOLIAR SPRAYING OF SELENIUM ON SOME YIELD AND BIOCHEMICAL PARAMETERS ON THE LETTUCE (<i>Lactuca sativa</i> L.)
P2_56	Jelena Pantović, Sandra Vuković, Sofija Kilibarda, Ana Vujošević, Aleksandar Ž. Kostić, Maja Sudimac, Đorđe Moravčević ICEBERG LETTUCE IN DIFFERENT CROPPING SYSTEMS
P2_57	Đorđe Moravčević, Aleksandar Ž. Kostić, Ana Vujošević, Sandra Vuković, Sofija Kilibarda, Maja Sudimac, Stefan Gordanić, Jelena Pantović THE INFLUENCE OF MULCHING AND BIOREGULATORS ON THE PRODUCTION CHARACTERISTICS OF ENDIVES
P2_58	Vojislav Trkulja, Gordana Babić, Jelena Mihić Salapura, Bojana Ćurković, Bojana Vuković, Jovana Prijić, Bogdan Nedić SURVEY ON THE PRESENCE OF QUARANTINE BACTERIA OF POTATOES <i>Ralstonia solanacearum</i> AND <i>Clavibacter sepedonicus</i> IN REPUBLIC OF SRPSKA 2011-2022

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PI_02

Trends of key irrigation water quality parameters in the endangered watercourses in Vojvodina (Serbia)

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Abstract

Irrigation water quality is presented by ion concentrations and parameters such as electroconductivity (EC), pH and total hardness (TH). Enlarged values of these indicators can have negative effects on irrigated soils and crops. Watercourses, highly endangered by different influences, were selected for analysis: Krivaja, Jegrička, Plazović, Vrbas-Bezdan (canal of the DTD hydrosystem) and Zlatica. The trend analysis was performed on the basis of monthly parameter values, published by public institutions (period 2001-2020). Because considered parameters have a seasonal character, seasonal Kendall test was used. This is a non-parametric trend test that takes into account serial correlation, and therefore intra-year fluctuations of values. From the aspect of irrigation, increasing trends are more important. The results show the existence of statistically significant ($\alpha=0.05$) trends. Increasing trends of Mg^{2+} and EC were detected in the Krivaja watercourse. In Jegrička watercourse, increasing trends of Ca^{2+} and EC were detected, while in Plazović watercourse were detected increasing trends of Na^+ , CO_3^- , Cl^- , EC and pH. In the Vrbas-Bezdan canal were detected increasing trends of Mg^{2+} , Na^+ , K^+ , CO_3^- , Cl^- , EC and pH. The increase in concentration of K^+ and Cl^- can be associated with the influence of industrial centers located along this canal. Zlatica watercourse is characterized by increasing trends of Ca^{2+} , Mg^{2+} , SO_4^{2-} , EC and TH. Such results in this watercourse can be related to the influence of leachate from the surrounding saline soils and transboundary impacts. The obtained results indicate to possible problems in the practice of irrigation using water from these watercourses.

Key words: irrigation, water quality, trend, watercourses

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