

X INTERNATIONAL SYMPOSIUM ON AGRICULTURAL SCIENCES

BOOK OF ABSTRACTS



AGRORES
2021

BOOK OF ABSTRACTS



**X INTERNATIONAL SYMPOSIUM ON
AGRICULTURAL SCIENCES**

**27-29, May, 2021
Trebinje
Bosnia and Herzegovina**

BOOK OF ABSTRACTS



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27-29, May, 2021; Trebinje, Bosnia and Herzegovina

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AGRICULTURAL SCIENCES



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27-29, May, 2021
Trebinje
Bosnia and Herzegovina

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SYMPOSIUM PROGRAM

SYMPOSIUM PROGRAM

	Thursday, May 27, 2021	
<i>Time</i>	Opening remarks	Cultural Centre Trebinje
14:00 – 14:30		
	Welcome address by: <ul style="list-style-type: none"> - Zlatan Kovačević, Dean of Faculty of Agriculture, University of Banja Luka; - Boris Pašalić, Minister of Agriculture, Forestry and Water Management of the Republic of Srpska; - Mirko Ćurić, Mayer of the City of Trebinje; - Boban Ilić, SWG Secretary General; - Željko Vaško, President of the Organizing Committee. 	
	Plenary session	Cultural Centre Trebinje
	<i>Moderator: Željko Vaško</i>	
14:30 – 15:00 PL_01	Aleksandra Martinovska-Stojčeska AGRICULTURAL POLICY IN THE EU APPROXIMATION CONTEXT: STATE OF AFFAIRS IN PRE-ACCESSION COUNTRIES	
15:00 – 15:30 PL_02	Ordan Čukaliev ASSESSMENT OF THE AGRI-ENVIRONMENTAL POLICY IN WESTERN BALKANS	
15:30 – 16:00 PL_03	Vlado Kovačević REVIEW OF GEOGRAPHICAL INDICATIONS SCHEMES IN SOUTH EAST EUROPE	
16:00–16:30	Discussion	
	Social event	Trebišnjica river
17:00 – 19:00	Boating on Trebišnjica river and wine tasting	

	Friday, May 28, 2021
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	SECTION 1: CROP SCIENCE	<i>Session 1</i>
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	Oral Presentations	Hotel „Leotar“, Hall A and Google Meet platform
	<i>Moderator: Mihajlo Marković</i>	
09:00-09:15 O1_01	Muftah Krayem STUDY OF THE CHEMICAL COMPOSITION OF TRITICALE TO COMPARE WITH OTHER CEREAL CROPS GENOTYPE	
09:15-09:30 O1_02	Vojin Cvijanović, Gorica Cvijanović, Nenad Đurić, Vojin Đukić, Mladen Petrović, Vesna Stepić, Zlatica Miladinov CRUDE PROTEIN CONTENT IN WHEAT GRAIN DEPENDING ON THE FEEDING METHOD	
09:30-09:45 O1_03	Marija Bajagić, Vojin Đukić, Zlatica Miladinov, Gordana Dozet, Gorica Cvijanović, Jegor Miladinov, Vojin Cvijanović EFFECTS OF FALL AND SPRING PRIMARY TILLAGE ON SOYBEAN YIELD AND 1000-GRAIN WEIGHT IN AGRO ECOLOGICAL CONDITIONS SERBIA	
09:45-10:00 O1_04	Mihajlo Voruna, Ognjen Cvijić, Zorana Đekanović, Duška Delić DETECTION OF <i>GAEUMANNOMYCES TRITICI</i> IN WHEAT	
10:00-10:15 O1_05	Mihajlo Marković, Nataša Čereković, Đurađ Hajder, Milan Šipka, Nery Zapata, Teresa A. Paço, Erminio Efsio Riezzo, Sabrija Čadro, Mladen Todorović PROMOTING SMART AGRICULTURAL WATER MANAGEMENT IN BOSNIA AND HERZEGOVINA “SMARTWATER” PROJECT	
P1_01	Marina Crnković, Đorđe Malenčić, Kristina Petrović, Jovana Šućur INFLUENCE OF THE MACROPHOMINA PHASEOLINA (TASSI) GOID. ON SOD ACTIVITY IN FOUR DIFFERENT GENOTYPES OF SOYBEAN SEEDLINGS	
P1_02	Jelena Golijan, Aleksandar Kostić, Biljana Dojčinović, Danijel Milinčić, Slavoljub Lekić DETERMINATION OF P, K AND MG CONTENT IN MAIZE SEED SUBJECTED TO THE ACCELERATING AGEING TEST	

P1_03	Ljubiša Živanović, Jelena Golijan, Dragana Živanović, Jela Ikanović, Ljubica Šarčević-Todosijević EFFECTS OF SEED INOCULATION, NPK FERTILIZATION AND NITROGEN FERTILIZATION ON YIELD COMPONENTS AND BEAN SEED YIELDS
P1_04	Ljubiša Živanović, Jelena Golijan, Jela Ikanović, Ljubiša Kolarić, Vera Popović, Ljubica Šarčević-Todosijević INFLUENCE OF CULTIVAR, SOIL CONDITIONERS AND NPK FERTILIZERS ON YIELD COMPONENTS AND BEAN GRAIN YIELD
P1_05	Aleksandar Simić, Marija Čosić, Mirjam Vujadinović – Mandić, Snežana Babić, Đorđe Moravčević, Dragan Stanojević, Stefan Stepić SEASONAL WATER NEEDS OF MEADOWS AND PASTURES IN DIFFERENT REGIONS OF SERBIA
P1_06	Željko Dolijanović, Svetlana Roljević Nikolić, Nemanja Gršić, Snežana Oljača, Milena Simić, Zoran Jovović EFFECTS OF DIFFERENT GROWING SYSTEMS ON THE GRAIN YIELD OF WINTER WHEAT
P1_07	Dalibor Tomić, Vladeta Stevović, Dragan Đurović, Milomirka Madić, Vesna Đurović, Marjanović Miloš, Đorđe Lazarević APPLICATION OF PRE-SOWING TREATMENTS WITH GIBBERELLIC ACID IN WHITE CLOVER
P1_08	Ružica Ždero Pavlović, Bojana Blagojević, Milan Miroslavljević, Boris Popović ASSESSMENT OF DROUGHT STRESS ON BARLEY (<i>HORDEUM VULGARE</i> L.) SEEDLINGS USING BIOCHEMICAL PARAMETERS
P1_09	Lovro Sinkovič, Barbara Pipan, Aleksandra Savić, Mirjana Vasić, Vladimir Meglič GENETIC DIVERSITY OF <i>LATHYRUS SATIVUS</i> L. COLLECTION AND CHARACTERISTICS OF SEEDS GROWN IN SLOVENIA AND SERBIA
P1_10	Jovana Žunić, Dijana Mihajlović, Biljana Kelečević, Zlatan Kovačević DETERMINATION OF POTENTIALLY TOXIC ELEMENTS IN COMMON WILD PLANTS USED IN FOLK MEDICINE
P1_11	Vladimir Filipović, Sara Mikić, Vladan Ugrenović, Tatjana Marković, Vera Popović, Snežana Mrđan, Stefan Gordanić THE INFLUENCE OF BIOFUNGICIDES ON GERMINATION AND PROTECTION OF THE SEEDS <i>FOENICULUM VULGARE</i> L.
P1_12	Milan Biberdžić, Dragana Lalević, Saša Barać, Jelena Stojiljković, Milomirka Madić, Vera Rajčić INFLUENCE OF MINERAL FERTILIZERS AND ZEOLITES APPLICATION ON THE YIELD OF SOME WHEAT VARIETIES

P1_13	Blažo Lalević, Ajla Omerašević, Branislav Knežević, Amer Sunulahpašić, Monika Stojanova, Snežana Hrnčić, Saud Hamidović ESSENTIAL OIL OF FENNEL IN SUPPRESSION OF <i>BOTRYTIS CINEREA</i> PERS. FR.
P1_14	Vesna Počuča, Gordana Matović, Enika Gregorić ANALYSIS OF THE WATER REGIME OF CHERNOZEM UNDER WINTER WHEAT CROPS IN THE REGION OF ZEMUN FROM 1966/67 TO 2019/20
P1_15	Saud Hamidović, Dženita Medenjaković, Teofil Gavrić, Fejzo Bašić, Vera Karličić, Siniša Mitrić, Blazo Lalevic ANTIFUNGAL ACTIVITY OF SODIUM BICARBONATE AND GARLIC AQUEOUS EXTRACT
P1_16	Sonja Gvozdenc, Ana Marjanović Jeromela, Tijana Zeremski, Nadežda Stojanov, Jelena Ovuka, Sandra Cvejić, Dejan Prvulović BIORATIONAL CO ₂ FUMIGATION OF OIL-SEED RAPE: INSECTICIDAL POTENTIAL AND EFFECT ON SEED QUALITY
P1_17	Marina Dervišević, Nikola Đorđević, Isidora Knežević, Snežana Đorđević ANTAGONISTIC ACTIVITY OF BACTERIAL ISOLATES AGAINST <i>CERCOSPORA BETICOLA</i> IN LABORATORY CONDITIONS
P1_18	Isidora Knežević, Marina Dervišević, Nikola Đorđević, Snežana Đorđević ANTIFUNGAL ACTIVITY OF <i>BACILLUS</i> SP. AGAINST <i>FUSARIUM GRAMINEARUM</i>
P1_19	Snežana Mladenović Drinić, Jelena Vukadinović, Danijela Ristić, Ana Nikolić, Jelena Srdić, Natalija Kravić, Violeta Anđelković TOCOPHEROLS VARIABILITY IN MAIZE INBRED LINES WITH DIFFERENT COLOR AND KERNEL TYPE
P1_20	Sandhya Takooree, Nooreen Mamode Ally, Hudaa Neetoo, Mala Ranghoo-Sanmukhiya, Mira Vojvodić, Aleksandra Bulajić TWO NEW FUNGAL DISEASES OF TOMATO AND POTATO ENDANGERING PRODUCTION IN MAURITIUS
P1_21	Amer Sunulahpašić, Branimir Nježić, Monika Stojanova, Dženita Medenjaković, Berina Imamović, Blazo Lalevic, Saud Hamidović INHIBITION OF <i>BOTRYTIS CINEREA</i> PERS. FR. GROWTH USING ROSEMARY AND LAVENDER ESSENTIAL OILS
P1_22	Nemanja Gršić, Željko Dolijanović, Đorđe Moravčević, Marija Ćosić, Aleksa Lipovac, Mirjam Vujadinović-Mandić SEASONAL WATER REQUIREMENTS OF MAIZE IN THE REGION OF VOJVODINA
P1_23	Markola Šaulić, Ivica Đalović, Mostafa Oveisi, Vladan Jovanović, Dragana Božić, Sava Vrbničanin WHICH METHODS ARE THE MOST RELIABLE FOR PREDICT WEED SEED BANK?

P1_24	Vojislav Trkulja, Jelena Mihić Salapura, Bojana Ćurković, Bojana Vuković, Gordana Babić, Jovana Prijić, Bogdan Nedić SURVEY ON THE PRESENCE OF <i>RALSTONIA SOLANACEARUM</i> , THE CAUSAL AGENT OF POTATO BROWN ROT IN REPUBLIC OF SRPSKA 2011-2020
10:15-11:15	Discussion of oral and poster presentations


	SECTION 2: HORTICULTURE	<i>Session 2</i>
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	Oral Presentations	Hotel „Leotar“ , Hall B and Google Meet platform
	<i>Moderator: Miljan Cvetković</i>	
09:00-09:15 O2_01	Miljan Cvetković, Alisa Hadžiabulić, Silva Grobelnik Mlakar COMPARATIVE ANALYSIS OF UNIVERSITY-BUSINESS COOPERATION IN AGRICULTURE IN THE WESTERN BALKANS AND EU	
09:15-09:30 O2_02	Neva Karatas, Sezai Ercisli FRUIT CHARACTERISTICS OF <i>PYRUS ELAEAGRIFOLIA</i> PALL. GENOTYPES IN EASTERN TURKEY	
09:30-09:45 O2_03	Radoš Zelenbabić, Boris Pašalić, Miljan Cvetković THE INFLUENCE OF REFLECTIVE MATERIALS ON FRUIT CHARACTERISTICS AND RED SKIN COLORATION OF “IDARED” APPLES	
09:45-10:00 O2_04	Ljubica Vavan, Ermin Suljkanović, Miljan Cvetković VEGETATIVE CHARACTERISTICS AND INITIAL FRUIT-BEARING CAPACITY OF PEAR GROWN ON DIFFERENT TRAINING SYSTEMS	
10:00-10:15 O2_05	Halil Ibrahim Sagbas, Gulce Ilhan, Sezai Ercisli SOME IMPORTANT FRUIT CHARACTERISTICS OF DIVERSE <i>ELAEAGNUS ANGUSTIFOLIA</i> L. GENOTYPES FROM CORUH VALLEY IN TURKEY	
10:15-10:30 O2_06	Gulce Ilhan, Ataturk University, Sezai Ercisli SUGAR AND ORGANIC ACIDS IN UNGRAFTED LOQUAT (<i>ERIOBOTRYA JAPONICA</i> LINDL.) GENOTYPES IN CORUH VALLEY IN TURKEY	
10:30-10:45 O2_07	Muhammed Kupe, Sezai Ercisli BIOCHEMICAL DIFFERENCES BETWEEN CULTIVATED (<i>VITIS VINIFERA</i> L. SSP. <i>VINIFERA</i>) AND WILD GRAPEVINES (<i>VITIS VINIFERA</i> L. SSP. <i>SYLVESTRIA</i> (GMELIN) HEGI)	

10:45-11:00 O2_08	Stefan Gordanić, Aleksandar Simić, Dragoja Radanović, Tatjana Marković, Snežana Mrđan, Sandra Vuković, Vladimir Filipović, Sara Mikić MORPHOLOGICAL DEFINITION POPULATIONS OF <i>ALLIUM URSINUM</i> L. FROM THE WESTERN PART OF THE REPUBLIC OF SERBIA
11:00-11:15 O2_09	Radenka Kolarov, Dejan Prvulović, Sonja Gvozdenac ANTIOXIDANT CAPACITY OF WILD-GROWING ORANGE MULLEIN (<i>VERBASCUM PHLOMOIDES</i> L.)
11:15-11:30 O2_10	Zorana Đekanović, Mišaela Vakić, Mariana Mihaljica, Duška Delić IN VITRO TRIALS OF ANTIFUNGAL EFFECT USING PYROPHYLLITE
11:30-11:45 O2_11	Mišaela Vakić, Mirko Jokić, Mariana Radulović, Siniša Mitrić, Duška Delić FORECASTING THE OCCURRENCE OF RASPBERRY GREY MOLD DISEASE (<i>BOTRYTIS CINEREA</i> PERS.) AND FUNGICIDE EFFICACY
11:45-12:00 O2_12	Petar Nikolić, Jovana Bila Dubaić FIRST FINDING OF SCULPTURED RESIN BEE (<i>MEGACHILE SCULPTURALIS</i> SMITH) IN BOSNIA AND HERZEGOVINA
12:00-12:15 O2_13	Branimir Nježić, Sandra Golubović, Petar Nikolić, Borut Bosančić TROPIC STRUCTURES OF NEMATODES IN RELATION TO VEGETATION TYPE AND LAND USE
P2_01	Jasmina Aliman, Maja Kazazić, Emina Mehić, Maida Đapo-Lavić, Mirnesa Smajić PHYSICOCHEMICAL AND ANTIOXIDANT PROPERTIES OF THREE STRAWBERRY CULTIVARS AND WILD STRAWBERRY FROM CENTRAL BOSNIA REGION
P2_02	Svjetlana Zeljković, Tanja Ećim, Jelena Davidović Gidas, Emina Mladenović EFFECTS OF DIFFERENT SUBSTRATES ON GROWTH AND DEVELOPMENT OF GLOBE AMARANTH (<i>GOMPHRENA GLOBOSA</i> L.)
P2_03	Milena Lakićević, Milena Maksimović, Branislava Pavlović, Mia Vicković FLORISTIC ELEMENTS IN THE DANUBE PARK (NOVI SAD, SERBIA)
P2_04	Milena Lakićević, Emina Mladenović, Saša Orlović, Lazar Pavlović, Ksenija Hiel POPLAR TREES IN THE UNIVERSITY PARK IN NOVI SAD (SERBIA)
P2_05	Dragan Žnidarčić NITROGEN RATES INFLUENCE ON RADICCHIO YIELD AND YIELD COMPONENTS

P2_06	Marija Ćosić, Aleksa Lipovac, Mirjam Vujadinović Mandić, Zorica Ranković – Vasić, Ana Vuković Vimić, Zoran Pržić, Dunja Sotonica GRAPEVINE WATER REQUIREMENTS IN DIFFERENT REGIONS OF SERBIA
P2_08	Marija Simonović, Jovana Miletić, Milica Veselinović, Draga Graora DISTRIBUTION OF INVASIVE SPECIES <i>PHYLLOCNISTIS VITEGENELLA</i> CLEMENS (LEPIDOPTERA: GRACILLARIIDAE) ON GRAPEVINE IN SERBIA
P2_09	Draga Graora, Marija Simonović, Marina Dervišević, Novica Miletić PRESENCE AND HARMFULNESS OF SAN JOSE SCALE, <i>COMSTOCKASPIS PERNICIOSA</i> (COMSTOCK) ON CHERRY TREES
P2_10	Marijana Peić Tukuljac, Dejan Prvulović, Sonja Gvozdenac THE INFLUENCE OF EXTRACTION SOLVENT ON ANTIOXIDANT POTENTIAL OF ST. JOHN'S WORT (<i>HYPERICUM PERFORATUM</i> L.)
P2_11	Boban Đorđević, Dejan Đurović, Gordan Zec SENSITIVITY OF FLOWER BUDS OF SWEET CHERRY CV. CARMEN ON DIFFERENT ROOTSTOCKS DURING THE ECOLOGICAL DORMANCY
P2_12	Aleksa Lipovac, Dragan Nikolić, Dejan Đurović, Đordje Boškov, Mirjam Vujadinović-Mandić, Ana Vuković-Vimić, Marija Ćosić IRRIGATION WATER REQUIREMENT OF FRUIT TREES IN THE CENTRAL, WEST AND SOUTH SERBIA ON A DISTRICT SCALE
P2_13	Nikolina Lisov, Ivana Plavšić, Aleksandar Petrović, Ljiljana Gojković Bukarica EFFECTS OF THERMOVINIFICATION AND CARBONIC MACERATION ON POLYPHENOLS EXTRACTION CV. CABERNET SAUVIGNON
P2_14	Đorđe Vojnović, Žarko Ilin, Boris Adamović, Gabrijela Koprivica EFFECT OF SUBSTRATE TYPE AND VOLUME OF CONTAINER POTS ON THE MORPHOLOGICAL CHARACTERISTICS OF LETTUCE (<i>LACTUCA SATIVA</i> L.) SEEDLINGS
P2_15	Gorica Vuković, Tijana Stojanović, Aleksandra Petrović, Bojan Konstantinović, Nikola Puvača, Dušan Marinković, Bojana Špirović Trifunović, Vojislava Bursić TROPANE ALKALOIDS IN MINT TEAS AT THE SERBIAN MARKET
P2_16	Bojana Blagojević, Anna Teresa Serra, Maja Milović, Ružica Ždero Pavlović, Tatjana Jurić, Nenad Magazin, Alicja Kucharska, Boris Popović <i>PRUNUS</i> FRUITS – POWERFUL FUNCTIONAL FRUITS

P2_17	Biljana D. Bošković, Miloš Pajić, Milan Dražić, Kosta Gligorević, Mitar Davidović THE INFLUENCE OF THE EXPLOITATION PERIOD OF THE ORCHARD SPRAYER ON THE TECHNICAL CORRECTNESS OF THE MEASURING REGULATORY SYSTEM
P2_18	Borut Bosančić, Ljubica Vavan, Sonja Rašeta, Marina Antić, Petar Nikolić, Branimir Nježić MORPHOLOGICAL VARIATIONS OF SEED CHARACTERISTICS IN STUDIED POPULATIONS OF YELLOW GENTIAN IN THE AREA OF KUPRES HEIGHTS
12:15-13:15	Discussion of oral and poster presentations

	SECTION 3: ANIMAL SCIENCES	<i>Session 3</i>
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	Oral Presentations	Hotel „Leotar“, Hall A and Google Meet platform
	<i>Moderator: Nebojša Savić</i>	
11:30-11:45 O3_01	Mirna Gavran, Drago Bešlo, Maja Gregić, Danko Šinka, Zvonimir Steiner, Vesna Gantner PREDICTION OF AMMONIUM EMISSION FROM DAIRY CATTLE USING THE PRECISION FARMING METHODOLOGY	
11:45-12:00 O3_02	Zvonimir Steiner, Ivan Babić, Vesna Gantner, Stipo Benak, Mario Ronta, Stanko Ivanković THE COST PRICE OF THE INCREMENT OF CALVES FED DAIRY PRONOUNS THAT CONTAIN DIFFERENT LEVELS OF PROTEIN AND ENERGY	
12:00-12:15 O3_03	Mirna Gavran, Matko Adrić, Vesna Gantner THE USE OF HORSES IN THE EVENTING – A REVIEW	
12:15 -12:30 O3_04	Biljana Rogić, Sara Popadić, Bojana Rudić, Slađana Preradović, Božo Važić PEDIGREE ANALYSIS OF LIPIZZAN STALLIONS: GENERATION INTERVAL AND INBREEDING	
P3_01	Bratislav Pešić, Nikola Stolić, Nebojša Zlatković DAMAGES TO AGRICULTURAL CROPS CAUSED BY AN INCREASE IN THE NUMBER OF WILD BOARS IN THE HUNTING GROUND "KUTLAVICA"	
P3_02	Nebojša Savić, Dragan Mikavica NECESSITY OF ESTABLISHING REPRODUCTIVE CENTERS FOR FISH IN BOSNIA AND HERZEGOVINA	

P3_03	Dragan Mikavica, Nebojša Savić USE OF "SMALL" HYDROACCUMULATION FOR THE PURPOSE OF FISH PRODUCTION
P3_04	Angeleska Aleksandra, Crceva Nikolovska Radmila, Dimitrieska Stojkovic Elizabeta, Katerina Blagoevska, Risto Uzunov, Biljana Dimzoska Stojanovska MEASUREMENT OF THE 226RA, 232TH AND 40K ACTIVITIES IN CORN IN THE REPUBLIC OF NORTH MACEDONIA AND RESULTING ANNUAL RADIATION DOSE BY INGESTION
P3_05	Radmila Crceva Nikolovska, Aleksandra Angeleska, Zehra Hajrulai Musliu, Riste Uzunov FEEDING INFLUENCE ON THE QUALITY OF SHEEP MEAT: FROM THE FARM TO THE FORK
P3_06	Bojan Golić, Vesna Kalaba, Tanja Ilić MICROBIOLOGICAL STATUS OF DRINKING WATER ON FARMS IN THE REPUBLIC OF SRPSKA (B&H) IN THE PERIOD 2018-2020 IN RELATION TO THE EXAMINED PARAMETERS
P3_07	Nebojša Zlatković, Bratislav Pešić, Nikola Stolić INFLUENCE OF MAXIMUM DAILY TEMPERATURE AND TEMPERATURE-HUMIDITY INDEX ON PIG GROWTH IN FATTENING
P3_08	Vesna Kalaba, Bojan Golić, Tanja Ilić COMPARISON OF THE ANTIBACTERIAL EFFECT OF MANUKA HONEY AND DOMESTIC ACACIA HONEY
P3_09	Nebojša Savić, Dragan Mikavica EFFECTS OF DIFFERENT LIGHT INTENSITY ON THE GROWTH OF RAINBOW TROUT (<i>ONCORHYNCHUS MYKISS</i>) FINGERLINGS
P3_10	Sergey Semyonov, Aleksandr Aristov EFFECTIVENESS OF A FEED ADDITIVE IN ORGANIC ANIMAL HUSBANDRY
12:30-13:30	Discussion of oral and poster presentations

	SECTION 4: AGRICULTURAL ECONOMICS AND RURAL DEVELOPMENT	<i>Session 4</i>
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Oral Presentations	Hotel „Leotar“, Hall C and Google Meet platform
Moderator: Gordana Rokvić Knežić	

09:00-09:15 O4_01	Mihajlo Munčan, Jelena Đoković, Tamara Paunović CHANGE OF FAMILY FARM PRODUCTION TYPE IN TERMS OF INCREASING ECONOMIC BUSINESS RESULTS
09:15-09:30 O4_02	Ana Vujošević, Đorđe Moravčević, Sandra Vuković POSITION AND PERSPECTIVES OF SUSTAINABLE DEVELOPMENT OF HORTICULTURAL PRODUCTION IN THE REPUBLIC OF SERBIA
09:30-09:45 O4_03	Dragan Dokić, Mirna Gavran, Vesna Gantner A COMPARATIVE ANALYSIS OF THE COST MANAGEMENT IN CEREAL PRODUCTION IN CROATIA AND EUROPEAN UNION
09:45-10:00 O4_04	Nebojša Novković, Nataša Vukelić, Zorica Sredojević, Snežana Jovanović, Veljko Šarac ANALYSING AND PREDICTION OF CEREALS PRODUCTION CHARACTERISTICS IN VOJVODINA
10:00-10:15 O4_05	Nebojša Novković, Beba Mutavdžić, Dragana Tekić, Ljiljana Drinić, Gordana Rokvić ANALYSING AND PREDICTION OF CEREALS PRICES REPUBLIC OF SERBIA
10:15-10:30 O4_06	Mladen Petrović, Nikola Ljiljanić, Vojin Cvijanović, Vedran Tomić, Robert Radišić FINANCIAL ASPECTS OF POTATO PRODUCTION ON FARMS IN THE REPUBLIC OF SERBIA
10:30-10:45 O4_07	Lana Nastić, Sanjin Ivanović, Marko Jeločnik EVALUATION OF INVESTMENTS IN COW - CALF PRODUCTION IN SERBIA USING MODIFIED INTERNAL RATE OF RETURN APPROACH
10:45-11:00 O4_08	Željko Vaško VALUATION OF INVESTMENT OPPORTUNITIES: GOAT FARM VERSUS SHEEP FARM IN THE CONDITIONS OF BOSNIA AND HERZEGOVINA
11:00-11:15 O4_09	Marija Nikolić RECONSIDERATION OF COOPERATIVE PRINCIPLES – PILLAR OF DEVELOPMENT OR LIMITATION FACTOR?
11:15-11:30 O4_10	Gordana Rokvić Knežić, Adrijan Gunić COOPERATIVE OWNERSHIP AND COOPERATIVE PROPERTY IN AGRICULTURAL SECTOR
11:30-11:45 O4_11	Gordana Rokvić Knežić, Jelena Đurić, Ljiljana Drinić AGRITOURISM AS A SPECIFIC FORM OF RURAL TOURISM
11:45-12:00 O4_12	Dragan Brenjo, Novo Pržulj, Zlatan Sarić, Radoslav Grujić, Džemil Hajrić DETERMINING THE CRITERIA FOR THE LABEL "MOUNTAIN PRODUCT", IN BOSNIA AND HERZEGOVINA, ON THE EXAMPLE OF THE MOST IMPORTANT INDIGENOUS CHEESES

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12:00-12:15 O4_13	Vlado Kovačević REVIEW OF WAREHOUSE RECEIPT AS AN INSTRUMENT FOR AGRICULTURAL FINANCING IN SERBIA
12:15-12:30 O4_14	Edis Beširović, Johannes Holzner, Dragan Brković ANALYSIS OF THE AGRICULTURAL INVESTMENT MARKET IN WESTERN BALKAN COUNTRIES
P4_01	Ankica Kondić-Špika, Ana Marjanović Jeromela, Dragana Miladinović, Tijana Zeremski, Jegor Miladinović THE INSTITUTE OF FIELD AND VEGETABLE CROPS AS A GOOD EXAMPLE FOR TRANSFER OF KNOWLEDGE AND NEW TECHNOLOGIES INTO AGRICULTURAL PRACTICE IN SERBIA
P4_02	Miroslav Nedeljković FORECASTING OF PLUM PRODUCTION TREND IN REPUBLIC OF SRPSKA
P4_03	Aleksandar Ostojić, Nebojša Savić, Nemanja Jalić, Vera Kanlić SUPPLY AND DEMAND OF FISH IN BOSNIA AND HERZEGOVINA AND REPUBLIC OF SRPSKA
P4_04	Tamara Stojanović, Gordana Rokvić Knežić FINANCIAL ANALYSIS OF AGRICULTURAL COOPERATIVES IN THE REPUBLIC OF SRPSKA
P4_05	Ljiljana Drinić, Gordana Rokvić Knežić, Nataša Đenadija MOTIVATIONAL FACTORS OF FEMALE ENTREPRENEURS
P4_06	Dragan Milić, Tihomir Novaković, Grahovac Mila, Dragana Budakov, Jovana Grahovac, Vanja Vlajkov ANALYSIS OF PESTICIDE IMPORTS IN THE REPUBLIC OF SERBIA
12:15-13:15	Discussion of oral and poster presentations

	PANEL: ICT IN AGRICULTURE	<i>Session 5</i>
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	Oral Discussion	Hotel „Leotar“, Hall A
16:00–18:00	<p>Moderator: Miljan Cvetković <i>University of Banja Luka, Faculty of Agriculture, Banja Luka, BiH</i></p>	
	<p>INFORMATIVE COMMUNICATION TECHNOLOGIES AND AGRICULTURE - HOW MUCH DO WE KNOW, AND HOW MUCH DO WE ACTUALLY APPLY IN REGULAR PRODUCTION?</p> <p>Panelists:</p> <p>Prof. Dr. Vesna Maraš, Dean <i>University of Donja Gorica, Faculty of Food Technology, Food Safety and Ecology, Podgorica, Montenegro</i></p> <p>Prof. Dr. Radovan Stojanović <i>University of Montenegro, Podgorica, Montenegro, Founder and President of the Montenegrin Association for New Technologies (MANT)</i></p> <p>Mirko Jokić, BSc Agric. <i>Ministry of Agriculture, Forestry and Water Management of the Republic of Srpska, Department for the Provision of Agricultural Extension Services, BiH</i></p> <p>Milan Šipka, MA <i>University of Banja Luka, Faculty of Agriculture, Banja Luka, BiH</i></p> <p>The panel session is supported by the Erasmus+ project VIRAL</p>	
	<p>With the support of the Erasmus+ Programme of the European Union</p> 	

P1_08

Assessment of drought stress on barley (*Hordeum vulgare* L.) seedlings using biochemical parameters

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Abstract

On a global scale, drought stress causes a significant threat to plant production. If barley plants experience drought stress at the seedling stage it may reduce plant fitness and affects the grain yield at the final stage of growth. In this study was investigated the relationship between drought and oxidative stress tolerance in barley. Twenty days after germination, two two-row winter barley cultivars NONIUS and NS 565 were exposed to 5 days long drought. The activity of antioxidant enzymes, superoxide dismutase (SOD), catalase (CAT) and guaiacol peroxidase (POD) were determined. Lipid peroxidation and relative electrolyte leakage were investigated as parameters of oxidative stress. When NONIUS seedlings were exposed to drought stress, the antioxidant system could not effectively remove reactive oxygen species, leading to increased lipid peroxidation (an increase from 44.3 to 74.0 nmol/g FW) and damage of membrane (an increase from 8.9 to 23.9%). Drought stress also decreased relative water content (RWC) more in cultivar NONIUS than in cultivar NS 565, and increased proline content, soluble protein, and electrolyte leakage in both cultivar. Proline is effective in increasing the cell turgor and the activity of antioxidant enzymes. When plants were in drought conditions, proline accumulates in both cultivars more than in control. It was observed that cultivar NONIUS was exposed to a higher level of oxidative stress than barley cultivar NS 565. In NONIUS seedlings, the activity of SOD, enzyme involved in scavenging of superoxide anion radical, was increased only in root samples while in leaf samples stayed at the control level. In leaf samples of cultivar NONIUS special emphasis is on increased GPX activity under drought (increased from 3.1 to 6.2 $\mu\text{mol}/\text{mg}$ protein). According to the results obtained in this study, cultivar NS 565 is a more appropriate choice for production in environments where spring drought is expected.

Key words: antioxidant enzymes, barley, drought stress, proline