



**XI INTERNATIONAL SYMPOSIUM OF  
AGRICULTURAL SCIENCES**

**BOOK OF ABSTRACTS**

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**XI INTERNATIONAL  
SYMPOSIUM OF  
AGRICULTURAL SCIENCES**

**26-28, May, 2022  
Trebinje  
Bosnia and Herzegovina**

BOOK OF ABSTRACTS



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# **SYMPOSIUM PROGRAM**

## PROGRAM OVERVIEW

| <b>Thursday 26 May</b>       |  |   |
|------------------------------|--|---|
| 13:00 – 18:00                | Symposium registration   | Coloseum                                    |
| 14:30 – 15:00                | Opening ceremony   | Hall 2                                      |
| 15:00 – 16:15                | Plenary lectures   |   |
| 16:15 – 16:45                | Coffee break   | Hotel Panorama                              |
| 16:45 – 18:00                | Plenary lectures   | Hall 2                                      |
| 18:00 – 19:00                | Drinks reception   | Entno village                               |
| 20:30 – 21:30                | Concert of Trebinje Church Choir St. Vasilije Ostrški and Trebinjski | Coloseum                                    |
| <b>Friday 27 May</b>         |  |   |
| 08:30 – 17:00                | Symposium registration   | Coloseum                                    |
| 09:00 – 11:10                | Session 1 Crop science 1   | Hall 1                                      |
| 11:20 – 11:40                | Coffee break   | Hotel Panorama                              |
| 11:40 – 13:30                | Sesion 1 Crop science 2  | Hall 1                                      |
| 09:00 – 11:30                | Session 2 Horticulture 1   | Hall 2                                      |
| 11:30 – 12:00                | Coffee break   | Hotel Panorama                              |
| 12:00 – 14:00                | Session 2 Horticulture 2   | Hall 2                                      |
| 09:00 – 11:00                | Session 3 Agricultural economics and rural development               | Hall 3                                      |
| 11:00 – 11:30                | Coffee break   | Hotel Panorama                              |
| 11:30 – 13:30                | Session 4 Animal science   | Hall 3                                      |
| 13:30 – 15:30                | Lunch break  | Hotel Panorama                              |
| 15:30 – 17:30                | Raund table  | Hall 1                                      |
| 16:00 – 18:00                | Conference of agricultural engineers of the Republic of Srpska       | Hall 2                                      |
| 20:00                        | Gala evening   | Hotel Panorama                              |
| <b>Saturday 27 May, 2022</b> |  |   |
| 09:00 – 13:00                | Conference Tour  | Milk factory Pađeni and Monastery Dobričevo |

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## SCIENTIFIC PROGRAM

---

**Thursday, May 26**

|   |   |
|---|---|
|   | The City of Sun'Trebinje Hall<br>2  |
| <b>14:30 – 15:00</b>                            | <ul style="list-style-type: none"> <li>- Zlatan Kovačević, Dean of the Faculty of Agriculture, University of Banja Luka;</li> <li>- Radoslav Gajanin, Rector of the University of Banja Luka;</li> <li>- Boris Pašalić, Minister of Agriculture, Forestry and Water Management of the Republic of Srpska;</li> <li>- Srđan Rajčević, Minister for Scientific and Technological Development, Higher Education and Information Society;</li> <li>- Mladen Todorović, IAMB</li> <li>- Branimir Nježić, President of the Organizing Committee.</li> </ul> |
|   | The City of Sun'Trebinje Hall<br>2  |
| <b>Chair: Branimir Nježić, Mladen Todorović</b> |   |
| <b>15:00 – 15:25<br/>PL_01</b>                  | Carlo Leifert<br>INTEGRATED SOIL, CROP AND LIVESTOCK MANAGEMENT IN ORGANIC AGRICULTURE; A LOGICAL FRAMEWORK TO ENSURE FOOD SECURITY AND HUMAN HEALTH?   |
| <b>15:25 – 15:50<br/>PL_02</b>                  | Mary Ann Lila<br>IF FOOD IS MEDICINE, THEM HOW CAN WE INCREASE ITS INFLUENCE ON IMMUNE HEALTH?  |
| <b>15:50 – 16:15<br/>PL_03</b>                  | Manuel Mota<br>PLANT PARASITIC NEMATODES, FROM SOIL TO TOP OF PLANT: A CHALLENGE FOR OUR TIME   |
| <b>16:15 – 16:45</b>                            | Coffee break  |
| <b>16:45 – 17:10<br/>PL_04</b>                  | Felix H. Arion<br>DOING AGRIBUSINESS IN A COMPETITIVE ENVIRONMENT   |
| <b>17:10 – 17:35<br/>PL_05</b>                  | Z.T. Popovski, B. Tanaskovski, E. Miskoska – Milevska M. Terzic<br>FURTHER CHALLENGES OF GENETIC MODIFICATION IN AGRICULTURE  |
| <b>17:35 – 18:00<br/>PL_06</b>                  | Milan Miroslavljević, Vojislava Momčilović, Tanja Dražić, Vladimir Aćin<br>CHANGES IN PHYSIOLOGICAL AND QUALITY TRAITS RELATED TO THE BREEDING PROGRESS   |
| <b>18:00 – 19:00</b>                            | Drinks reception  |

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**Friday, May 27**

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**SESSION 1: CROP SCIENCE 1**

**Oral Presentations**

The City of Sun`Trebinje Hall 1

**Chair: Novo Pržulj, Mihajlo Marković, Jan Turan**

|                             |  |
|-----------------------------|--|
| <b>09:00-09:15</b><br>O1_01 | Nedović Viktor, <b>Invited lecture</b><br>SMART SPECIALIZATION STRATEGY: CONCEPT,<br>METHODOLOGY, AGRI-FOOD AS AREA OF PRIORITY,<br>REGIONAL VALUE CHAIN   |
| <b>09:15-09:25</b><br>O1_02 | Mihajlo Marković, Zlatan Kovačević, Vojo Radić, Nataša Čereković,<br>Jovana Žunić, Mladen Babić, Nery Zapata, Teresa A. Paço, Erminio<br>Efisio Riezzo, Benjamin Crljenković, Sabrija Čadro, Mladen Todorović<br>SMART AGRICULTURAL WATER MANAGEMENT OF MAIZE<br>CROP CULTIVATION ON TWO DIFFERENT PEDOCLIMATIC<br>LOCATIONS IN BOSNIA AND HERZEGOVINA |
| <b>09:25-09:35</b><br>O1_03 | Miloš Nožinić, Novo Pržulj, Dejan Simić<br>ANALYSIS OF CLIMATE CHANGES IN PERI - PANNONIAN<br>BASIN AND DINARIC REGION / BASIS FOR FUTURE<br>AGRICULTURAL STRATEGIES   |
| <b>09:35-09:45</b><br>O1_04 | Zapata, N., Playán, E., Castillo, R., Gimeno, Y., Oliván, I., Jiménez, A,<br>Carbonell, X., Fabregas, M., López-Pardo, J.R., Vicente, L.M., Millán,<br>J., Solano, D., Lorenzo, M.A.<br>CLASSIFICATION OF IRRIGATED AREAS: APPLICATION TO<br>THE CENTRAL EBRO RIVER BASIN (SPAIN)  |
| <b>09:45-09:55</b><br>O1_05 | Enrique Playán, Nery Zapata, Borja Latorre, Javier Burguete<br>IRRIGATION, HYDROLOGY AND CROP YIELD SIMULATION IN<br>A SOLID-SET SPRINKLER IRRIGATED FARM  |
| <b>09:55-10:05</b><br>O1_06 | Vladimir Višacki, Jan Turan, Aleksandar Sedlar, Patrik Burg, Vladimir<br>Masan, Rajko Bugarin, Filip Vasić<br>VARIABLE CORN SOWING BASED ON SOIL POTENTIAL   |
| <b>10:05-10:15</b><br>O1_07 | Marko Mladenović, Jovan Pavlov, Zoran Čamdžija, Aleksandar<br>Kovačević, Sanja Perić, Olivera Đorđević Melnik, Nikola Grčić<br>GRAIN YIELD PERFORMANCE AND ADAPTATION TO<br>DIFFERENT ENVIRONMENTAL CONDITIONS OF ZP<br>COMMERCIAL MAIZE HYBRIDS   |
| <b>10:15-10:25</b><br>O1_08 | Savo Vučković, Vera Popović, Vojo Radić, Dragan Terzić<br>PRODUCTIVITY OF NATURAL GRASSLAND AND PASTURES<br>OF SERBIA AND SRPSKA   |
| <b>10:25-10:35</b><br>O1_09 | Sanja Vasiljević, Zorica Nikolić, Vojislav Mihailović, Snežana<br>Katanski, Dalibor Živanov, Zlatica Mamlić, Vojin Đukić, Ana Uhlarik<br>EFFECT OF CUTTING MANAGEMENT ON SEED YIELD, SEED<br>YIELD COMPONENTS AND SEED QUALITY OF RED CLOVER<br>( <i>TRIFOLIUM PRETENSE</i> L.)  |

|                             |  |
|-----------------------------|--|
| <b>10:35-10:45</b><br>O1_10 | Snežana Brajević, Aleksandar Simić, Gordana Andrejić, Ružica Stričević, Željko Dželetović, Uroš Aleksić, Slaviša Đorđević<br>THE EFFECTS OF FERTILIZATION TREATMENTS ON PHYTOREMEDIATION PROPERTIES OF TALL FESCUE ( <i>FESTUCA ARUNDINACEA</i> SCHREB.) |
| <b>10:45-11:00</b>          | <b>Poster presentations</b><br>Posters: P1_01 – P1_19  |
| <b>11:00-11:10</b>          | <b>Discussion</b>  |
| <b>11:10-11:30</b>          | <b>Coffee break</b>  |

## SESSION 1: CROP SCIENCE 2

### Oral Presentations

The City of Sun'Trebinje Hall 1

### Chair: Sava Vrbničanin, Savo Vučković, Sandra Cvejić

|                             |  |
|-----------------------------|--|
| <b>11:30-11:45</b><br>O1_11 | Goran Bekavac, Goran Malidža, Ivica Đalović, Božana Purar, Miroslav Zorić, <b>Invited lecture</b><br>CTM HYBRIDS – A UNIQUE SOLUTION IN MAIZE PRODUCTION   |
| <b>11:45-11:55</b><br>O1_12 | Miloš Nožinić, Dejan Simić<br>ANALYSIS OF SOYBEAN VARIETAL TRIALS IN 2015 AND 2016 / DANUBE SOYA PROJECT   |
| <b>11:55-12:05</b><br>O1_13 | Desimir Knežević, Aleksandra Yu. Novoselskaya-Dragovich, Aleksandar Paunović, Danijela Kondić, Svetlana Roljević Nikolić, Adriana Radosavac, Tomislav Brzaković, Mirjana Menkovska<br>VARIATION OF PROTEIN CONTENT IN WHEAT SEED |
| <b>12:05-12:15</b><br>O1_14 | Sandra Cvejić, Siniša Jocić, Milan Jocković, Boško Dedić, Sonja Gvozdenac, Aleksandra Radanović, Ankica Kondić Špika, Ana Marjanović Jeromela, Dragana Miladinović<br>ADVANCED PHENOTYPING TECHNIQUES IN SUNFLOWER BREEDING      |
| <b>12:15-12:25</b><br>O1_15 | Muftah Krayem<br>STUDY OF THE AMINO ACID CONTENT OF TRITICALE TO COMPARE WITH OTHER CEREAL CROPS GENOTYPE  |
| <b>12:25-12:35</b><br>O1_16 | Sonja Gvozdenac, Željko Milovac, Sandra Cvejić, Jelena Ovuka, Dragana Miladinović, Siniša Jocić, Miloš Krstić<br>ARE DROUGHT AND PRECIPITATION PATTERNS AFFECTING SUNFLOWER SUSCEPTIBILITY WIREWORMS?                            |
| <b>12:35-12:45</b><br>O1_17 | Jernej Jakše, Ajay Kumar Mishra, Jaroslav Matoušek, Tanja Guček, Nataša Štajner, Sebastjan Radišek<br>CBCVD VIROID THREAT TO EUROPEAN HOP PRODUCTION   |

|                             |  |
|-----------------------------|--|
| <b>12:45-12:55</b><br>O1_18 | Andrej Sečnik, Nataša Štajner, Sebastjan Radišek, Mitja Križman, Jernej Jakše<br>CYTOSINE METHYLATION IN GENOMIC DNA AND IDENTIFICATION OF DNA METHYLASES AND DEMETHYLASES IN VIROID-INFECTED HOP PLANTS ( <i>HUMULUS LUPULUS</i> VAR. 'CELEIA') |
| <b>12:55-13:20</b>          | <b>Poster presentations: P1_20 – P1_40</b>   |
| <b>13:20-13:30</b>          | <b>Discussion</b>  |

| <b>SESSION 2: HORTICULTURE 1</b>                                     |   |
|--|---|
| <b>Oral Presentations</b>  | The City of Sun'Trebinje Hall 2   |
| <b>Chair: Sanja Radonjić, Dragoslav Ivanišević, Miljan Cvetković</b> |   |
| <b>09:00-09:15</b><br>O2_01  | Dragoslav Ivanišević, Mladen Kalajdžić, Predrag Božović, Dragan Milošević, <b>Invited lecture</b><br>THE RESPONSE OF GRAPEVINE CULTIVARS TO CLIMATE CHANGE                                |
| <b>09:15-09:25</b><br>O2_02  | Darko Jaksic, Mirjam Vujadinovic Mandic, Ana Vukovic Vimic, Ivan Bradic, Jordana Ninkov, Bojan Mandic, Veljko Perovic<br>PROKUPAC VINE VARIETY – IN EXPECTATION OF CLIMATE CHANGES        |
| <b>09:25-09:35</b><br>O2_03  | Katarina Rudolf Pilih, Nataša Štajner, Jana Murovec, Borut Bohanec, Jernej Jakše<br>RAPID BREEDING OF NEW CABBAGE ( <i>BRASSICA OLERACEA</i> VAR. <i>CAPITATA</i> L.) HYBRID VARIETIES    |
| <b>09:35-09:45</b><br>O2_04  | Sanja Lazić, Dragana Šunjka, Slavica Vuković, Dragana Bošković, Aleksandra Šušnjar, Antonije Žunić<br>DISSIPATION AND RESIDUES OF EMAMECTIN BENZOATE IN PAPRIKA                           |
| <b>09:45-09:55</b><br>O2_05  | Milan Adamović, Mirjana Stojanović, Aleksandra Bočarov Stančić, Muhamed Harbinja, Jasmina Kustura<br>INFLUENCE OF NATURAL AND ENRICHED PYROPHYLLITE ON ONION YIELD ( <i>ALLIUM CEPA</i> ) |
| <b>09:55-10:05</b><br>O2_06  | Milena Lakićević, Anja Đoković<br>INVASIVE SPECIES IN THE OLD PARK IN TEMERIN (SERBIA)  |
| <b>10:05-10:15</b>   | <b>Discussion</b>   |
| <b>10:15-11:30</b>   | <b>Poster presentations:P2_01 – P2_26</b>   |
| <b>11:30-12:00</b>   | <b>Coffee break</b>   |



| <b>SESSION 2: HORTICULTURE 2</b>                               |  |
|--|--|
| <b>Oral Presentations</b> The City of Sun'Trebinje Hall 2      |  |
| <b>Chair: Dragana Šunjka, Ivana Glišić, Miljan Cvetković</b>   |  |
| <b>12:00-12:15</b><br>O2_07                                    | Maria João Carvalho, Silvina Ferro Palma, <b>Invited lecture</b><br>OLIVE OIL SENSORY QUALITY  |
| <b>12:15-12:25</b><br>O2_08                                    | Sanja Radonjić, Snježana Hrnčić<br>NON-EU FRUIT FLIES SERIOUS THREAT FOR EUROPEAN<br>FRUIT PRODUCTION  |
| <b>12:25-12:35</b><br>O2_09                                    | Mišaela Vakić, Duška Delić, Mariana Mihaljica, Amer Sunulahpašić,<br>Janis Tzanetakis<br>BLUEBERRY LATENT VIRUS IN HIGHBUSH BLUEBERRY<br>( <i>VACCINIUM CORYMBOSUM</i> L.) IN BOSNIA AND<br>HERZEGOVINA                  |
| <b>12:35-12:45</b><br>O2_10                                    | Slavica Vuković, Dragana Šunjka, Sanja Lazić, Antonije Žunić, Dragana<br>Bošković, Miloš Petrović<br>CONTROL OF <i>CYDIA POMONELLA</i> L. IN APPLE ORCHARDS<br>USING SPINETORAM, PYRIPROXYFEN AND<br>CHLORANTRANILIPROLE |
| <b>12:45-12:55</b><br>O2_11                                    | Biljana Lolić, Biljana Radusin Sopić, Jelena Nikitović, Marina Antić,<br>Tatjana Milaković<br>REVIEWING THE PROGRESS AND MEASURES FOR CONTROL<br>OF <i>PHYTOPHTHORA FRAGARIAE</i> VAR. <i>RUBI</i>                       |
| <b>12:55-13:05</b><br>O2_12                                    | Vanja Miljanić, Denis Rusjan, Andreja Škvarč, Philippe Chatelet, Nataša<br>Štajner<br>ELIMINATION OF GRAPEVINE VIRUSES AND VIROIDS<br>THROUGH IN VIVO THERMOTHERAPY AND IN VITRO<br>MERISTEM TIP MICROGRAFTING           |
| <b>13:05-13:15</b>   | <b>Discussion</b>  |
| <b>13:15-13:45</b>   | <b>Poster presentations</b><br><b>Posters: P2_27 – P2_48</b>   |
| <b>SESSION 3: AGRICULTURAL ECONOMICS AND RURAL DEVELOPMENT</b> |  |
| <b>Oral Presentations</b> The City of Sun'Trebinje Hall 3      |  |
| <b>Chair: Željko Vaško, Stanislaw Minta, Nebojša Novković</b>  |  |
| <b>09:00-09:10</b><br>O3_01                                    | Gordana Rokvić Knežić, Ljiljana Drinić<br>EUROPEAN GREEN AGENDA AND IMPLICATIONS FOR<br>AGRICULTURE AND RURAL DEVELOPMENT POLICY OF<br>BOSNIA AND HERZEGOVINA  |
| <b>09:10-09:20</b><br>O3_02                                    | Željko Vaško<br>IMPACT OF THE COVID-19 PANDEMIC ON AGRICULTURE AND<br>FOOD SUPPLY – EVIDENCE FROM THE REPUBLIC OF SRPSKA   |

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| <b>09:20-09:30</b><br>O3_03 | Leila Šeper<br>FOOD FOR FUTURE - CONSUMER PERSPECTIVE  |
| <b>09:30-09:40</b><br>O3_04 | Stanislaw Minta, Jerzy Koronczok<br>INTEREST OF POLISH FARMERS IN WATER AND DRAINAGE INVESTMENTS – SELECTED RESULTS OF THE INOMEL PROJECT                      |
| <b>09:40-09:50</b><br>O3_05 | Vesna Mrdalj, Aleksandar Ostojić, Željko Vaško<br>EXPORT COMPETITIVENESS OF MILK AND DAIRY PRODUCTS OF REPUBLIC OF SRPSKA ON THE INTERNATIONAL MARKET          |
| <b>09:50-10:00</b><br>O3_06 | Nebojša Novković, Beba Mutavdžić, Nataša Vukelić, Blagoje Paunović, Veljko Šarac<br>ANALYSIS AND FORECASTING OF FRUIT PRICES IN SERBIA                         |
| <b>10:00-10:10</b><br>O3_07 | Natalia Jędroszka<br>FISH MARKET ANALYSIS WITH PARTICULAR EMPHASIS ON THE RECIRCULATING AQUACULTURE SYSTEM (RAS)   |
| <b>10:10-10:20</b><br>O3_08 | Nemanja Jalić, Aleksandar Ostojić, Vesna Mrdalj<br>EXTERNAL PRICE PARITIES OF WHEAT AND MAIZE IN THE REPUBLIC OF SRPSKA  |
| <b>10:20-10:30</b><br>O3_09 | Rafal Ramut<br>THE ECONOMIC SIGNIFICANCE OF BIOSTIMULANTS ON THE EXAMPLE OF ORCHARD PRODUCTION   |
| <b>10:30-10:40</b><br>O3_10 | Zorica Srđević, Ružica Stričević, Bojan Srđević, Aleksa Lipovac<br>CLIMATE CHANGE ADAPTATION MEASURES IN AGRICULTURE: PERSPECTIVE OF DIFFERENT EXPERTS' GROUPS |
| <b>10:40-10:50</b>          | SWG group, Sponsored presentation  |
| <b>10:50-11:00</b>          | <b>Discussion</b>  |
| <b>11:00-11:30</b>          | <b>Poster presentations: P3_01 – P3_12</b>   |
| <b>11:30-12:00</b>          | <b>Coffee break</b>  |

#### SECTION 4: ANIMAL SCIENCES

**Oral Presentations** The City of Sun'Trebinje Hall 3

**Chair: Biljana Rogić, Radica Đedović, Vesna Ganter**

|                             |  |
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| <b>12:00-12:15</b><br>O4_01 | Muhamed Brka, Radica Đedović, Snežana Trivunović, Vesna Gantner,<br><b>Invited lecture</b><br>SUSTAINABLE DEVELOPMENT OF LIVESTOCK PRODUCTION IN THE LIGHT OF CLIMATE CHANGE |
| <b>12:15-12:30</b><br>O4_02 | Vasco Fitas da Cruz, <b>Invited lecture</b><br>OVERVIEW OF RESEARCH AND EDUCATION ACTIVITIES IN PRECISION LIVESTOCK FARMING  |

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| <b>12:30-12:45</b><br>O4_03 | Vesna Gantner, Muhamed Brka, Božo Važić, <b>Invited lecture</b><br>THE PRECISION TECHNOLOGIES IN LIVESTOCK PRODUCTION   |
| <b>12:45-12:55</b><br>O4_04 | Dragan Stanojević, Radica Đedović, Vladan Bogdanović, Krstina Zeljić Stojiljković, Nikolija Gligović, Ivan Mitrović, Marina Lazarević, Ljiljana Samolovac<br>THE IMPACT OF BREEDING REGION AND LACTATION ON MILK YIELD TRAITS IN THE OF SIMMENTAL CATTLE POPULATION OF THE REPUBLIC OF SERBIA |
| <b>12:55-13:05</b><br>O4_05 | Bouhroum Nassima, Bensahli Belmehel<br>HARM TO THE WELL-BEING OF THE UDDER AT THE LEVEL OF DAIRY FARMS OF SIDI MHAMED BENALI WILAYA OF RELIZANE (ALGERIA)   |
| <b>13:05-13:15</b><br>O4_06 | Biljana Rogić, Ljuba Štrbac, Slađana Preradović, Božo Važić<br>PHENOTYPIC DESCRIPTION OF THE LIPICANE HORSES POPULATION FROM BOSNIA AND HERZEGOVINA AND SERBIA  |
| <b>13:15-13:25</b>          | <b>Discussion</b>   |
| <b>13:25-14:10</b>          | <b>Poster presentations: P4_01 – P4_21</b>  |
|                             |   |
|                             | <b>ROUND TABLE</b>  |
|                             | The City of Sun'Trebinje Hall 1   |
| <b>15:30-17:30</b>          | <b>Future of education on agricultural faculties in Balkan countries</b>  |
|                             | <b>Chair: to be unounced</b>  |
|                             |   |
|                             | <b>XXVII SAVJETOVANJE INŽINJERA POLJOPRIVREDE REPUBLIKE SRPSKE</b><br>Stručno savjetovanje na temu:<br><b>ORGANSKA POLJOPRIVREDA – SADAŠNJE STANJE I TENDENCIJE RAZVOJA</b>   |
|                             | <b>Oral presentations</b>   |
|                             | The City of Sun'Trebinje Hall 2   |
|                             | <b>Moderator: Vida Todorović i Stoja Jotanović</b>  |
| <b>16:00–16:05</b>          | Pozdravna riječ: Zlatan Kovačević, Siniša Mitrić  |
| <b>16:05 –16:25</b>         | Dragana Zec<br>SADAŠNJE STANJE I PERSPEKTIVE RAZVOJA ORGANSKE POLJOPRIVREDE I ZAKONSKA REGULATIVA   |
| <b>16:25- 16:45</b>         | Željko Dolijanović<br>POSEBNI (ALTERNATIVNI) SISTEMI GAJENJA U ORGANSKOJ POLJOPRIVREDI (PLODORED, ZDRUŽENI I POKROVNI USEVI)  |
| <b>16:45-17:05</b>          | Vida Todorović<br>OSNOVNI PRINCIPI ORGANSKE PROIZVODNJE POVRĆA  |

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| <b>17:05-17:25</b> | Stoja Jotanović<br>SPECIFIČNOSTI ANIMALNE ORGANSKE PROIZVODNJE                          |
| <b>17:25-17:45</b> | Grujica Vico<br>SPECIFIČNOSTI MARKETINGA I TRŽIŠTA PROIZVODA U<br>ORGANSKOJ PROIZVODNJI |
| <b>17:45-18:00</b> | Diskusija   |

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| SESSION 1: CROP SCIENCE |  |
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| P1_01                   | Dorđe Todić, Dragan Mandić<br>INFLUENCE OF DIFFERENT QUANTITIES OF NITROGEN FERTILIZERS ON YIELD AND QUALITY OF BANJA LUKA WHEAT VARIETIES JULIJA AND NOVA BOSANKA IN THE DRY 2021   |
| P1_02                   | Gorica Cvijanović, Vesna Stepić, Marija Bajagić, Vojin Đukić, Jovana Sekulić, Vojin Cvijanović, Zlatica Miladinov<br>INFLUENCE OF ZINC APPLICATION ON GRAIN YIELD AND LEAF AREA OF DIFFERENT MAIZE GENOTYPES   |
| P1_03                   | Ljubomir Životić, Boško Gajić, Lazar Kaluđerović, Marija Ćosić, Vojislav Lazović<br>DIFFERENCES IN DETERMINATION OF SOIL ERODIBILITY BETWEEN USLE NOMOGRAPH AND ERODIBILITY EQUATION   |
| P1_04                   | Marijenka Tabaković<br>IMPORTANCE OF SOWING DATE OPTIMIZATION FOR MORPHOLOGICAL PROPERTIES AND GRAIN YIELD   |
| P1_05                   | Milan Biberdžić, Saša Barać, Dragana Lalević, Aleksandar Đikić, Jelena Stojiljković<br>THE INFLUENCE OF FERTILIZATION ON SOIL COMPACTION AND MAIZE YIELD   |
| P1_06                   | Željko Lakić, Marina Antić, Igor Đurđić<br>INFLUENCE OF DIFFERENT FERTILIZATION TREATMENTS ON AGRONOMIC PROPERTIES OF BROAD BEANS ( <i>VICIA FABEA</i> SSP. <i>EUFABA</i> VAR. <i>MAJOR HARZ.</i> )  |
| P1_07                   | Vladimir Višacki, Jan Turan, Aleksandar Sedlar, Patrik Burg, Vladimir Masan, Rajko Bugarin, Filip Vasić<br>VEGETATION INDICES FOR DIFFERENTIAL SOIL ZONES AND VARIABLE SOWING  |
| P1_08                   | Zoran Maličević, Željko Lakić, Milan Jugović<br>ADVANTAGE AND POSSIBILITIES OF APPLICATION OF PRECISE SYSTEMS IN AGRICULTURAL PRODUCTION   |
| P1_09                   | Jovana Žunić, Dijana Mihajlović, Biljana Kelečević, Zlatan Kovačević<br>PLANTS RESPONSE TO THE ELEVATED NICKEL (Ni) CONTENT IN THE SOIL  |
| P1_10                   | Aleksandra Angeleska, Radmila Crceva Nikolovska, Elizabeta Dimitrieska Stojkovik, Zehra Hajrulai Musliu, Biljana Dimzoska Stojanovska, Ana Angelovska<br>RADIONUCLIDE CONTAMINATION AND NUTRITIONAL EVALUATION OF MOSTLY USED WHEAT IN REPUBLIC OF NORTH MACEDONIA |
| P1_11                   | Gordana Andrejić, Snežana Brajević, Aleksandar Simić, Željko Dželetović, Uroš Aleksić, Dejan Sokolović<br>ACCUMULATION OF HEAVY METALS IN ROOT AND SHOOT OF RED FESCUE GROWN AT THE FLOTATION TAILINGS DUMP  |

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| P1_12 | Jelena Golijan, Aleksandar Ž. Kostić, Biljana P. Dojčinović, Danijel D. Milinčić, Mirjana B. Pešić, Slavoljub S. Lekić<br>EFFECTS OF DIFFERENT PRODUCTION METHODS ON CONTENT OF SOME MICROELEMENTS IN SPELT SEED ( <i>TRITICUM SPELTA</i> ) |
| P1_13 | Ljiljana Brbaklić, Milan Mirosavljević, Sanja Mikić, Verica Takač, Vladimir Aćin, Dragan Živančev<br>PHENOTYPIC DIVERSITY OF THE MOST IMPORTANT AGRONOMICAL TRAITS IN A LONG-TERM BREEDING PERIOD OF BARLEY BREEDING IN SERBIA              |
| P1_14 | Ivica Djalovic, Goran Bekavac, Jegor Miladinovic, Jitendra Kumar, Vara Prasad<br>ROOT TRAIT VARIABILITY IN CEREAL GRAIN CROPS: POTENTIAL USE IN BREEDING PROGRAMS TO ENHANCE ADAPTATION TO WATER STRESS                                     |
| P1_15 | Dalibor Tomić, Miloš Marjanović, Mirjana Radovanović, Vesna Đurović, Đorđe Lazarević, Vladeta Stevović, Nenad Pavlović<br>INTERDEPENDENCE OF SEED YIELD COMPONENTS OF PUMPKIN ( <i>CUCURBITA PEPO</i> L.) GENOTYPES                         |
| P1_16 | Vojo Radić, Ilija Komljenović, Miloš Berić<br>INTERDEPENDENCE OF YIELD AND SOYBEAN YIELD COMPONENTS   |
| P1_17 | Olivera Šimurina, Zvonko Nježić, Bojana Filipčev, Biljana Cvetković, Ivica Đalović, Goran Bekavac<br>QUALITY CHARACTERISTICS OF TORTILLA CHIPS BASED ON DARK RED CORN   |
| P1_18 | Ankica Kondić-Špika, Dragana Trkulja, Svetlana Glogovac, Ana Marjanović Jeromela, Dragana Rajković, Dragana Miladinović<br>INDUCED MUTATIONS IN CEREALS BREEDING  |
| P1_19 | Milan Stevanovic, Nikola Grčić, Milica Nikolić, Snežana Mladenović Drinić, Sanja Perić, Aleksandar Kovačević, Iva Savić<br>ZP4242- A NEW MAIZE HYBRID   |
| P1_20 | Sreten Terzić, Sandra Cvejić, Milan Jocković, Siniša Jocić, Vladimir Miklič<br>EFFECTS OF HIGH-TEMPERATURE STRESS ON MICROSPOROGENESIS AND POLLEN PRODUCTION IN SUNFLOWER   |
| P1_21 | Ivana Milenković, Ksenija Radotić<br>EFFECT OF MANGANESE ON ANTIOXIDANT ACTIVITY IN MAIZE   |
| P1_22 | Snežana Mladenović Drinić, Milica Nikolić, Jelena Vukadinović, Mirjana Srebrić, Slavica Stanković, Violeta Anđelković<br>GENETIC VARIABILITY OF MAIZE GRAIN ANTIOXIDANT COMPAUNDS   |
| P1_23 | Sanja Mikić, Milan Mirosavljević, Ljiljana Brbaklić, Vladimir Aćin, Radivoje Jevtić, Dragan Živančev<br>ANALYSIS OF LOCAL SERBIAN WHEAT VARIETIES AND LANDRACES AS A NEW SOURCE OF VARIABILITY FOR BREEDING                                 |
| P1_24 | Jelena Golijan<br>ORGANIC VS. CONVENTIONAL FOODS: DIFFERENCES IN NUTRIENTS  |
| P1_25 | Željko Dolijanović, Milena Simic, Snežana Oljača, Vesna Dragičević, Nemanja Gršić, Zoran Jovović<br>THE MOST IMPORTANT CROP MEASURES IN ORGANIC PRODUCTION OF WINTER WHEAT  |

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| P1_26 | Dragana Popović, Savo Vučković, Vera Rajčić, Vladimir Filipović, Jela Ikanović, Nataša Ljubičić, Vera Popović<br>ECONOMICALLY IMPORTANT OILSEED FLAX -NS PRIMUS   |
| P1_27 | Vesna Kandić, Dejan Dodig, Slađana Žilić, Marijana Simić, Valentina Nikolić<br>ZP BELIJA- WHEAT VARIETY FOR CONFECTIONERY INDUSTRY  |
| P1_28 | Nevena Nagl, Lovro Sinković, Mirjana Vasić, Vladimir Meglič, Aleksandra Savić, Zorica Nikolić, Gordana Petrović, Barbara Pipan, Ana Marjanović Jeromela<br>EVALUATION OF <i>LATHYRUS SATIVUS</i> L. SEED FOR PROTEIN CONTENT AND TRYPSIN INHIBITOR ACTIVITY |
| P1_29 | Mira Vojvodić, Brankica Tanović, Petar Mitrović, Ivana Vico, Aleksandra Bulajić<br>PATHOGENIC POTENTIAL OF <i>WAITEA CIRCINATA</i> VAR. <i>ZEAE</i>   |
| P1_30 | Vojislav Trkulja, Andrija Tomić<br>OCCURENCE, IMPORTANCE AND CONTROL OF <i>RAMULARIA COLLO-CYJNI</i> – AN EMERGING PATHOGEN IN BARLEY   |
| P1_31 | Markola Saulic, Ivica Djalovic, Mostafa Oveisi, Dragana Božić, Sava Vrbničanin<br>CROP ROTATION INFLUENCE ON VERTICAL WEED SEED BANK  |
| P1_32 | Zlatan Kovačević, Biljana Kelečević, Siniša Mitrić, Jovana Žunić<br>THREATENED COMMUNITIES <i>NYMPHAEION ALBAE</i> OBERDOFER 1957 ALLIANCE DEVELOPMENT IN RAMSAR AREA OF BARDAČA  |
| P1_33 | Biljana Kelečević, Siniša Mitrić, Zlatan Kovačević, Sava Vrbničanin<br>RESPONSE OF <i>XANTHIUM ORIENTALE</i> L. TO GLYPHOSATE   |
| P1_34 | Siniša Mitrić, Radmila Radulović, Biljana Kelečević, Zlatan Kovačević, Vaso Bojanić<br>EFFECT OF GLYPHOSATE ON WHEAT SEEDLINGS DEPENDING ON THE CHARACTERISTICS OF THE WATER  |
| P1_35 | Elizabet Janić Hajnal, Jovana Kos, Bojana Radić, Radmila Radović, Ivica Đalović, Božana Purar<br>CLIMATE CHANGE: THE IMPACT ON AFLATOXIN CONTAMINATION IN CEREALS   |
| P1_36 | Milica Nikolić, Iva Savić, Vesna Kandić, Milan Stevanović, Slavica Stanković<br>OCCURRENCE OF TOXIGENIC FUNGI ON SPELT GRAIN WITH SPECIAL REFERENCE TO <i>ASPERGILLUS</i> SPECIES   |
| P1_37 | Iva Savić, Milica Nikolić, Vesna Kandić, Slavica Stanković<br>OCCURRENCE OF MYCOTOXINS IN WHEAT GRAIN DURING THE PERIOD 2020 – 2021 IN SERBIA   |
| P1_38 | Vesna Vidović, Petar Nikolić, Snježana Hrnčić, Branimir Nježić<br>MONITORING OF THE BROWN MARMORATED STINK BUG ( <i>HALYOMORPHA HALYS</i> STÅL) IN BANJA LUKA, IN 2020 AND 2021   |
| P1_39 | Ankica Sarajlić, Marija Ravlić, Irena Jug, Boris Đurđević, Bojana Brozović, Andreas Horvatović, Danijel Jug<br>EFFECT OF SOIL AND FERTILIZATION MANAGEMENT ON MAIZE SUSCEPTIBILITY TO EUROPEAN CORN BORER ( <i>OSTRINIA NUBILALIS</i> HÜBNER)               |
| P1_40 | Stanislava Lazarevska, Alirami Saliji, Vesna Krsteska<br>OCCURENCE OF <i>PHTHORIMAEA OPERCULELLA</i> (ZELLER, 1873) IN POLOG REGION OF NORTH MACEDONIA  |

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| P1_41 | Urban Kunej , Ester Stajič , Jernej Jakše , Sebastjan Radišek, Nataša Štajner<br>IDENTIFICATION OF MICRORNA TARGETS RESPONSIVE TO <i>V. NONALFALFAE</i> INFECTION OF HOP ( <i>HUMULUS LUPULUS L.</i> ) |
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## SESSION 2: HORTICULTURE

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| P2_01 | Nataša Štajner, Kasunič T., Cesar T., Tatjana Jovanović-Cvetković, Gordana Đurić, Mandić A., Leko M., Nikolić D., Ranković Vasić Z., Ivanišević D., Beleski K., Dervishi A., Biniari K., Zdunić G., Lukšić K. , Ana Mucalo, Bubola M., Rusjan D., Maraš V., Bacilieri R., Jakše J.<br>VARIABILITY OF CHLOROPLASTS AND TARGETED NUCLEAR DNA OF GRAPEVINE ( <i>VITIS SP.</i> ) |
| P2_02 | Zorica Ranković-Vasić, Tatjana Jovanović-Cvetković, Mirjam Vujadinović Mandić, Jelena Ivanović, Milenko Blesić, Dragan Nikolić<br>SPECIFICS OF GROWING LOCALITY AND THEIR IMPACT ON THE GRAPE AND WINE QUALITY OF BLACK GRAPEVINE VARIETIES  |
| P2_03 | Zoran Pržić, Nebojša Marković, Aleksandar Simić, Željko Dželetović, Mariana Niculescu<br>TECHNOLOGICAL CHARACTERISTICS OF CABERNET SAUVIGNON CV CLONES GROWN IN CONDITIONS OF KRNJEVO VINE AREA  |
| P2_04 | Zorica Ranković-Vasić, Mirjam Vujadinović Mandić, Ana Vuković, Marija Čosić, Dunja Sotonica, Danijela Živojinović, Mihailo Andrić, Dragan Nikolić<br>INFLUENCE OF TEMPERATURE VALUES ON GRAPE QUALITY PARAMETERS IN CABERNET SAUVIGNON GRAPEVINE VARIETY   |
| P2_05 | Tatjana Jovanović-Cvetković, Srđan Bojbaša, Đurađ Hajder, Rada Grbić<br>CHARACTERISTICS OF TABLE VARIETIES MATILDE AND VICTORIA IN AGROECOLOGICAL CONDITIONS OF MOSTAR   |
| P2_06 | Draga Graora, Marija Simonović<br>INFESTATION RATE OF <i>PHYLLOCNISTIS VITEGENELLA CLEMENS</i> IN COMMERCIAL VINEYARD IN NEŠTIN  |
| P2_07 | Lisov Nikolina, Petrović Aleksandar, Plavšić Ivana, Ljiljana Gojković Bukarica<br>EXTRACTION KINETICS OF PHENOLIC ACIDS DURING PROLONGED MACERATION TIME AND VINIFICATION OF CABERNET SAUVIGNON GRAPE VARIETY  |
| P2_08 | Sonja Rašeta, David Ducanović, Đorđe Umićević, Borut Bosančić, Marina Antić<br>AGRO-MORPHOLOGICAL CHARACTERIZATION OF PEPPER ( <i>CAPSICUM ANNUUM L.</i> ) ACCESSIONS FROM GENE BANK OF REPUBLIC OF SRPSKA   |
| P2_09 | Barbara Pipan, Marina Antić, Dragana Rajković, Lovro Sinkovič, Sonja Rašeta, Nevena Nagl, Smiljana Goreta Ban, Vladimir Meglič, Vida Todorović, Ana Marjanović Jeromela<br>ASSESSMENT OF MOLECULAR DIVERSITY OF <i>BRASSICA OLERACEA VAR. ACEPHALA</i>   |

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| P2_10 | Lovro Sinkovič, Barbara Pipan, Mihaela Skrt, Nataša Poklar Ulrih, Vladimir Meglič<br>NUTRACEUTICAL AND MULTI-ELEMENT PROFILE OF ELEPHANT GARLIC ( <i>ALLIUM AMPELOPRASUM</i> L.) AND COMMON GARLIC ( <i>ALLIUM SATIVUS</i> L.) FROM SLOVENIA   |
| P2_11 | Nenad Pavlović, Miloš Marjanović, Jelena Mladenović, Dalibor Tomić, Ljiljana Bošković Rakočević, Đorđe Moravčević, Jasmina Zdravković<br>HEREDITY MODE OF DURATION OF VEGETATIVE STAGE IN ONION ( <i>ALLIUM CEPA</i> L.)   |
| P2_12 | Vida Todorović, Senad Murtić, Nikolina Đekić, Marina Antić, Borut Bosančić<br>MORPHO-PHYSIOLOGICAL CHARACTERISTICS OF RAMSON ( <i>ALLIUM URSINUM</i> L.)   |
| P2_13 | Đorđe Moravčević, Marko Krstić, Jelica Gvozdanović-Varga, Aleksandar Ž. Kostić, Ana Vujošević, Sofija Kilibarda, Sandra Vuković<br>THE CONTENT OF METALS AND METALLOIDS IN BULBS OF DIFFERENT GENOTYPES OF <i>ALLIUM</i> SPECIES   |
| P2_14 | Đorđe Moravčević, Slavica Jelačić, Ana Vujošević, Sofija Kilibarda, Jelena Pantović, Sandra Vuković<br>INFLUENCE OF LETTUCE CULTIVAR ON MORPHOLOGICAL PROPERTIES AND YIELD   |
| P2_15 | Jelena Pantović, Sandra Vuković, Sofija Kilibarda, Aleksa Lipovac, Maja Sudimac, Marija Čosić, Djordje Moravčević<br>EFFECTS OF CONTINUOUS FERTILIZATION ON THE TOMATO SEEDLING QUALITY  |
| P2_16 | Nkolina Đekić, Vida Todorović, Đorđe Moravčević, Borut Bosančić, Jelena Sladoje<br>INFLUENCE OF SHADING NET ON CHLOROPHYLL CONTENT, RELATIVE WATER CONTENT AND WEIGHT OF LETTUCE   |
| P2_17 | Mihajlo Voruna, Zorana Djekanović, Igor Dabić, Duška Delić<br>DETECTION OF SOFT ROT BACTERIA CAUSING POTATO BLACKLEG AND TUBER SOFT ROOT   |
| P2_18 | Jelena Čukanović, Sara Đorđević, Radenka Kolarov<br>ADAPTABILITY OF INDIGENOUS VEGETATION ON PARKING LOTS. CASE STUDY: TREE ALLEYS IN NOVI SAD, SERBIA   |
| P2_19 | Mirjana Mladenović, Nataša Saric<br>COURT GARDEN IN SREMSKI KARLOVCI – NATURAL AND CULTURAL HERITAGE OF SERBIA   |
| P2_20 | Jelena Davidović Gidas, Milana Vuković, Svjetlana Zeljković<br>CONCEPTUAL LANDSCAPE DESIGN OF CENTRAL PEDESTRIAN ZONE IN LAKTAŠI (BIH)   |
| P2_21 | Svjetlana Zeljković, Ivana Kozomara, Jelena Davidović Gidas, Margarita Davitkovska, Zvezda Bogevska<br>SEED GERMINATION OF <i>CALENDULA OFFICINALIS</i> L. UNDER INFLUENCE OF DIFFERENT LIGHT CONDITIONS   |
| P2_22 | Stefan Gordanić, Dragoja Radanović, Vladimir Filipović, Snežana Mrđan, Sara Mikić, Željana Prijić, Ana Dragumilo, Tatjana Marković<br>THE INFLUENCE OF ORGANIC BIOSTIMULATORS ON THE GROWTH AND DEVELOPMENT OF MEDICINAL AND AROMATIC PLANT SPECIES <i>OCIMUM BASILICUM</i> L. AND <i>LEVISTICUM OFFICINALE</i> L. |

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## **Phenotypic diversity of the most important agronomical traits in a long-term breeding period of barley breeding in Serbia**

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### **Abstract**

Barley breeding program in the Institute of Field and Vegetable Crops Novi Sad has a very long tradition. The great effort focused on selecting and creating varieties with high yielding potential and good malting quality. This study aimed to analyse phenotypic variation during the historical period. The studied material consisted of 90 representative barley genotypes, which varied in a row number and growing types (6-rowed winter, 2-rowed winter and spring types) encompassing three different breeding periods. Field experiments were conducted in three growing seasons using a randomised complete block design with three replications. Eight important agronomic traits were evaluated during this period. The ANOVA showed that most of the analysed traits varied significantly between seasons, row types, and breeding periods. Comparison of three groups with different row types revealed earlier heading and flowering time of two-rowed than six-rowed types of winter barley. The earliest heading and flowering time were observed in the third historical period. Also, the plant height significantly decreased in the last two breeding periods compared to the first period for these barley types, whereas spike length showed a significant increase in two-rowed barley types. As one of the most important agronomic traits, grain yield improved significantly over time. Obtained phenotypic variation of the analysed barley varieties showed their great potential for further barley breeding progress and improvement.

*Key words: Hordeum vulgare L., yield-related traits, agronomical variation, three breeding periods*